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**CARBONATE CHEMISTRY
OF THE ATLANTIC, PACIFIC AND INDIAN OCEANS:
THE RESULTS OF THE GEOSECS EXPEDITIONS, 1972-1978**

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**The Office of International Decade of Ocean Exploration,
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Technical Report No. 1, **CU-1-80**

**Lamont-Doherty Geological Observatory,
Pallsades, N.Y. 10964**

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PREFACE

The Geochemical Ocean Sections Study (GEOSECS) program was initiated in 1969 under the sponsorship of the Office of International Decade of Ocean Exploration, National Science Foundation. Its major objective is to measure the chemical and radiochemical properties in the waters of the three major world oceans to establish a base line for the assessment of the secular change in the chemistry of the oceans. The field measurements and collection of water samples were conducted in August, 1972-April, 1973 in the Atlantic Ocean, August, 1973-June, 1974, in the Pacific Ocean, and December, 1977-April, 1978, in the Indian Ocean. The program involved scientists from eight nations, and scientists, engineers and technicians from fourteen universities and research institutions in the United States. It is truly an international and inter-institutional cooperative research program. This report summarizes the results of the GEOSECS carbonate chemistry program, and presents the measured and calculated quantities of the carbonate chemistry of the world oceans. The publication of this report has been made possible by grants from the Office of International Decade of Ocean Exploration, National Science Foundation, Washington, D.C.

Arnold E. Bainbridge, our colleague since the inception of the GEOSECS program, died of a heart attack in February, 1979. He has contributed so much to the success of the program, in particular to the carbonate chemistry program through the development of the computerized potentiometric titrator for the high precision measurements of alkalinity and total CO_2 concentration in seawater. We will long remember his valuable and innovative contributions to the chemical oceanographic research for the world oceans, and wish to dedicate this volume to our friend and colleague, Arnold E. Bainbridge.

T.T.
W.S.B.
R.F.W.

June, 1980

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We thank the members of the GEOSECS Executive Committee, Harmon Craig of Scripps Institution of Oceanography, Derek W. Spencer of the Woods Hole Oceanographic Institution, and H. Gote Ostlund of the University of Miami, for supporting the publication of this report. Many scientists and technicians contributed to the success of the project. Mike Morrione of Scripps assisted Bainbridge for the design, construction and field operations of the titrator. Don Lingle, David L. Bos, Ed Slater, Ann Gilbert, Rick van Woy and Steve Tavern operated the titrator and gas chromatograph during the expeditions. Robert T. Williams and Arnold Mantyla of Scripps assisted in various phases of the field operations. Scientific advice given by David Keeling and Joris Gieskes of Scripps, and John M. Edmond of MIT are appreciated. The computer data management skill of Nathan Schechtman, Lamont-Doherty Observatory, is also appreciated. Without the contributions of these people, this project would not have been possible.

We gratefully acknowledge the program officers at the Office of IDOE, National Science Foundation, in particular Feenan D. Jennings, the former head of the IDOE Office, and Roger Baier, for their encouragement. Grants from the National Science Foundation to the Lamont-Doherty Geological Observatory (OCE-77-22891, and OCE-78-09857) and the Scripps Institution of Oceanography made the publication of this report possible.

TABLE OF CONTENTS

		<u>Pages</u>
I	INTRODUCTION	1
II	DETERMINATIONS OF ALKALINITY AND TOTAL CO ₂ CONCENTRATION	3
III	EXPLANATION FOR THE TABLES	5
IV	COMPUTATIONAL METHODS	7
V	REFERENCES	9
VI	GEOSECS STATION MAPS	
	Figure 1 Atlantic Ocean	
	Figure 2 Pacific Ocean	
	Figure 3 Indian Ocean	
VII	DEPTH PROFILES	
	Alkalinity vs. Depth:	
	Figure 4 North Atlantic; North of the equator and south of 36°N	
	Figure 5 South Atlantic; south of the equator and north of 45°S	
	Figure 6 North Pacific; north of the equator	
	Figure 7 South Pacific; south of the equator and north of 45°S	
	Figure 8 North Indian; north of the equator	
	Figure 9 South Indian; south of the equator and north of 45°S	
	Figure 10 Antarctic; south of 45°S	
	Total CO ₂ Concentration vs. Depth:	
	Figure 11 North Atlantic; north of the equator and south of 36°N	
	Figure 12 South Atlantic; south of the equator and north of 45°S	
	Figure 13 North Pacific; north of the equator	
	Figure 14 South Pacific; south of the equator and north of 45°S	
	Figure 15 North Indian; north of the equator	
	Figure 16 South Indian; south of the equator and north of 45°S	
	Figure 17 Antarctic; south of 45°S	
	CO ₃ ⁼ Ion Concentration vs. Depth:	
	Figure 18 North Atlantic; north of the equator and south of 36°N	
	Figure 19 South Atlantic; south of the equator and north of 45°S	
	Figure 20 North Pacific; north of the equator	
	Figure 21 South Pacific; south of the equator and north of 45°S	
	Figure 22 North Indian; north of the equator.	
	Figure 23 South Indian; south of the equator and north of 45°S	
	Figure 24 Antarctic; south of 45°S	
VIII	MEASURED AND CALCULATED QUANTITIES OF CARBONATE CHEMISTRY	
	Table 1 The Atlantic Ocean	
	Table 2 The Pacific Ocean	
	Table 3 The Indian Ocean	

I. INTRODUCTION

The investigation of the carbon dioxide-calcium carbonate system in the oceans was pioneered by Buch, Wattenberg and their associates in the 1930's (Buch et al., 1932; Buch 1933-a and 1933-b; Buch, 1938; Buch, 1939; Buch, 1951; Wattenberg, 1933; Wattenberg, 1936; Wattenberg and Timmerman, 1936). Since then, a number of refined determinations for the dissociation constants of carbonic and boric acids in seawater have been made by Lyman (1956), Disteché and Disteché (1967), Pytkowicz and his associates (e.g., Mehrbach et al., 1973; Culberson and Pytkowicz, 1968) and Hansson (1973). The solubility data for CO₂ seawater have been improved by Murray and Riley (1971) and Weiss (1974). Our knowledge of the reactions between seawater and CaCO₃ (i.e., mineral calcite and aragonite) and the solubilities of CaCO₃ has been rapidly increased by the investigations of Berner (e.g., Berner and Morse, 1974; and Berner, 1976), Pytkowicz and his associates (Pytkowicz and Connors, 1964; Pytkowicz et al., 1967; Pytkowicz and Fowler, 1967; Hawley and Pytkowicz, 1969), Millero (Millero, 1969; Millero and Berner, 1972), Ingle (Ingle et al., 1973; Ingle, 1975), Edmond and Gieskes (1970), Broecker and Takahashi (1977), Takahashi and Broecker (1977), Keir (1980), Morse et al. (1980) and others.

The study of the carbonate chemistry in the oceans has progressed rapidly because of the increased scientific and sociological interest on the fate of fossil fuel CO₂ in the oceans. The partial pressure of CO₂ exerted by the surface waters of the world oceans has been measured extensively since IGY, 1957-1959, by Keeling and his associates (e.g., Keeling et al., 1965; Keeling, 1965; Keeling et al., 1968; Keeling, 1968), Takahashi (1961 and 1979), Miyake and his associates (1974), Hood and his associates (Hood et al., 1963; Ibert, 1963) and others. On the other hand, the global measurement of various carbonate chemistry parameters such as alkalinity, total CO₂ concentration and pH in the deep ocean waters have been measured less extensively and in a less coordinated fashion so that the results of only several depth profiles have been obtained before the GEOSECS Expeditions (e.g., Li et al., 1969;

Edmond, 1970; Wong, 1970; Wyatt et al., 1970). One of the objectives for the GEOSECS program is to expand the data base for the carbonate chemistry in the world oceans. Although the results obtained in the Atlantic, Pacific and Indian Oceans have been partially summarized by Takahashi (1975), Broecker and Takahashi (1978), Takahashi et al. (1980) and Takahashi et al. (in press), they have not been fully published in a readily usable tabular form. This report summarizes and lists all the results of the GEOSECS carbonate chemistry program in the Atlantic, Pacific and Indian Oceans. The techniques used for the measurements of the alkalinity and total CO₂ concentration, and the constants used for computation of the various carbonate chemistry parameters are described.

II. DETERMINATIONS OF ALKALINITY AND TOTAL CO₂ CONCENTRATION

The alkalinity and total CO₂ concentration were determined by means of the automatized potentiometric acid titration method developed by A.E. Bainbridge and M. Morrione of the Scripps Institution of Oceanography (see Bos, 1980). This method is based upon the techniques described by Gran (1952), Dyrssen (1964) and Edmond (1970). The titrator used in the present investigation was calibrated using sodium borate decahydrate solutions prepared gravimetrically (Bos, 1980). A Baker analytical grade HCl solution (0.5N) was diluted to 0.25N, and used as a titrant. The ionic strength of the standard solutions was adjusted to that (0.7) of seawater using NaCl (for all Legs in the Atlantic and in the Pacific except Leg 6 of the Atlantic Expedition) or KCl (for Leg 6 in the Atlantic and all Legs in the Indian Ocean). It was observed that the halide added to the borate standard solutions appeared to contain a minor quantity of alkalinity blank. Therefore, the blank was incorporated into the "effective" volume for the titrator cell for processing of the data. The "effective" cell volume also includes a correction for the normality of the acid titrant used. An average blank value of 21.0 $\mu\text{eq/kg}$ was used throughout the computation of the alkalinity and total CO₂ concentration for the Atlantic and Pacific, and 5 $\mu\text{eq/kg}$ for the Indian Ocean. However, the nature of the alkalinity blank has not been clearly understood, and therefore, the alkalinity values included in this report may be subject to a systematic error of no greater than 21 $\mu\text{eq/kg}$. Since the blank was included in the "effective" cell volume, it affects the total CO₂ concentration in the same proportion as it does the alkalinity, and thus it does not affect the ratio of the alkalinity to total CO₂.

The titration data were processed using the Gran-plot computer program formulated originally by the late A.E. Bainbridge. However, because of his untimely death in 1979, the complete documentation of this program used for the data reduction of the Atlantic GEOSECS titration data has been lost. Although the second generation of the Bainbridge program, which was used for the Pacific and Indian Ocean GEOSECS, is

available, this is not necessarily the same one used for the Atlantic GEOSECS data reduction. Therefore, the alkalinity and total CO₂ values for the Atlantic listed in the following table bear some uncertainties stemming from the incomplete documentation of the original Bainbridge program used for the data processing.

Takahashi et al. (1976) compared the measured pCO₂ values with those calculated using the alkalinity and total CO₂ data to test the internal consistency among these three parameters. They found that these quantities are internally consistent with the solubility of CO₂ in seawater determined by Murray and Riley (1971) and Weiss (1974), the first and second apparent dissociation constants of carbonic acid in seawater determined by Mehrbach et al. (1973), and the first apparent dissociation constant of boric acid in seawater determined by Lyman (1956). Therefore, these sets of constants have been used for the computation of various carbonate chemistry parameters listed in the following tables.

During the Pacific GEOSECS Expeditions, it was discovered that the pCO₂ values measured by Broecker and Takahashi (1978) were consistently smaller, by 15 to 20%, than those computed from the alkalinity and the titrimetric total CO₂ concentration data. This inconsistency was also observed throughout the Indian Ocean GEOSECS program. Broecker and Takahashi (1978) observed that the alkalinity and pCO₂ values obtained in the Atlantic and Pacific Ocean sectors of the Circumpolar Water in the Antarctic region are mutually consistent, and therefore, proposed that the total CO₂ concentration determined by the titrimetric total CO₂ data obtained in the Pacific, the in situ CO₃²⁻ ion concentrations computed from the alkalinity and total CO₂ data for the Pacific can be made consistent with those for the Atlantic Ocean. Recently, Bradshaw and Brewer (1980), in close collaboration with Robert Williams and David Bos of Scripps Institution, have found that the effect of CO₃²⁻ ion on the Gran F₁' function was omitted in the Bainbridge program used for the reduction of the Pacific and Indian Ocean titration data. They have shown that the omission would cause an over estimation of the total CO₂

concentration by about 12 $\mu\text{M}/\text{kg}$. Furthermore, Brewer (personal communication) considers that this represents a minimum estimate of the error, and that the error might be greater if the effects of other ions such as HSO_4^- and $\text{Si}(\text{OH})_3\text{O}^-$ are taken into consideration. Thus, the original estimate of 15 $\mu\text{M}/\text{kg}$ correction proposed by Broecker and Takahashi (1978) for the systematic error in the titrimetric total CO_2 data has been accepted for this work, and applied to the titrimetric total CO_2 data for the Pacific and Indian Oceans.

The gas chromatographic method used for the determination of total CO_2 concentration in seawater has been described by Weiss and Craig (1973). This method was used throughout the GEOSECS program. Although the data thus obtained are listed in the following tables, they are not used for the computation of various carbonate chemistry parameters.

III. EXPLANATION FOR THE TABLES

The sample number, the depth (in meters), the in situ temperature (in $^\circ\text{C}$), the salinity (in o/oo), the total alkalinity (in 10^{-6} eq/kg), and the total CO_2 concentrations (in 10^{-6} M/kg) determined by the potentiometric and gas chromatographic methods are listed in the first seven columns. The titrimetric total CO_2 concentration data for the Pacific and Indian Oceans are corrected by -15 $\mu\text{M}/\text{kg}$. The gas chromatographic total CO_2 concentration data are listed for comparison only, and are not used for the calculation of various carbonate chemistry parameters.

Based upon the salinity, temperature, alkalinity and titrimetric total CO_2 concentration data, the values for pCO_2 (in 10^{-6} atm), the concentrations of H_2CO_3 , HCO_3^- and CO_3^{2-} ions (in 10^{-6} M/kg) and pH were computed at the in situ temperature and the 1 atm total pressures using the procedures explained in the following section. These values, which are listed in the next five columns, describe the carbonate chemistry in the waters decompressed isothermally to a total pressure of 1 atm.

IV. COMPUTATIONAL METHODS

The method of calculation of $p\text{CO}_2$, H_2CO_3 , HCO_3^- , $\text{CO}_3^{=}$, a_{H} and pH at 1 atmosphere total pressure and the in situ pressure is briefly described by Broecker and Takahashi (1978). The constants used for the present calculation are listed below.

1) The solubility of CO_2 in seawater after Weiss (1974):

$$\ln \alpha_s \text{ (M/kg.atm)} = A_1 + A_2(100/T) + A_3 \ln(T/100) + S \{ B_1 + B_2(T/100) + B_3(T/100)^2 \},$$

where \ln = the natural logarithm; T = absolute temperature ($^{\circ}\text{K}$);

S = salinity ($^{\circ}/\text{oo}$); $A_1 = -60.2409$; $A_2 = 93.4517$; $A_3 = 23.3585$;

$B_1 = 0.023517$; $B_2 = -0.023656$; and $B_3 = 0.0047036$.

2) The first and second apparent dissociation constants of carbonic acid in seawater (K_1' and K_2') determined by Mehrbach et al. (1973):

$$\log K_1' = A_1 + A_2T + A_3/T + B_1S/T + B_2 \sqrt{S},$$

where \log = the base 10 logarithm; $A_1 = 13.7201$; $A_2 = -0.0311334$;

$A_3 = -3235.76$; $B_1 = -1.3 \times 10^{-5}$; and $B_2 = 0.1032$.

$$\log K_2' = A_1 + A_2T + A_3/T + A_4 \log T + B_1S + B_2 \log S + C_1S/T + C_2(\log S)/T + C_3S/T,$$

where $A_1 = -5371.9645$; $A_2 = -1.671221$; $A_3 = 128375.28$; $A_4 = 2194.3055$;

$B_1 = -0.22913$; $B_2 = -18.3802$; $C_1 = 8.0944 \times 10^{-4}$; $C_2 = 5617.11$; and

$C_3 = 2.136$.

3) The first apparent dissociation constant of boric acid in seawater determined by Lyman (1956):

$$\log K_B' = -9.26 + 0.00886 S + 0.01 t,$$

where t is temperature in $^{\circ}\text{C}$.

4) The total borate concentration in seawater:

Based upon the summary of Culkin (1965), it is assumed that the total borate concentration is proportional to the salinity and is expressed by:

$$\text{TB(M/kg)} = 4.106 \times 10^{-4} (S/35).$$

5) The effect of pressure on the dissociation constants of carbonic and boric acid in seawater determined by Culberson et al. (1967) and Culberson (1972):

$$K_1'(P) = K_1'(1) \cdot \exp((24.2 - 0.085 t)CP),$$

$$K_2'(P) = K_2'(1) \cdot \exp((26.4 - 0.040 t)CP),$$

$$K_B'(P) = K_B'(1) \cdot \exp((27.5 - 0.095 t)CP), \text{ and}$$

$$CP = (P-1)/83.143 T,$$

where t is temperature in $^{\circ}\text{C}$; T , temperature in $^{\circ}\text{K}$; and P , pressure in bars. P and 1 in the parentheses denote the pressure conditions.

6) The apparent solubility product for calcite in seawater at 1 atm total pressure determined by Ingle et al. (1973):

$$K_{sp}'(\text{calcite}, 1 \text{ atm}, \text{ in } (\text{M}/\text{kg})^2) = (-34.452 - 39.866 S^{1/3} + 110.21 \log S - 7.5752 \times 10^{-6} T^2) 10^{-7},$$

where T is temperature in $^{\circ}\text{K}$.

7) The apparent solubility product for aragonite in seawater based upon Berner (1976):

The apparent solubility product for aragonite is 1.45 times of that for calcite at 1 atm total pressure, and is expressed by:

$$K_{sp}'(\text{aragonite}, 1 \text{ atm}, \text{ in } (\text{M}/\text{kg})^2) = 1.45 K_{sp}'(\text{calcite}, 1 \text{ atm}).$$

8) The effect of pressure on the solubility of calcite and aragonite summarized by Culberson (1972):

$$K_{sp}'(\text{calcite}, P) = K_{sp}'(\text{calcite}, 1) \cdot \exp((36.0 - 0.20 t)CP),$$

$$K_{sp}'(\text{aragonite}, P) = K_{sp}'(\text{aragonite}, 1) \cdot \exp((33.3 - 0.22 t)CP),$$

$$\text{and } CP = (P-1)/83.143 T,$$

where P is pressure in bars; T , temperature in $^{\circ}\text{K}$; and t , temperature in $^{\circ}\text{C}$.


```

C SUBROUTINE : CARBONATE CHEMISTRY CALCULATIONS
C
C THE FOLLOWING VARIABLES ARE PARAMETERS TO BE PASSED
C FROM THE MAIN PROGRAM.
C
C Z = DEPTH (M) INTEGER FORMAT
C FOR SOLUTION AT P = 1 ATM, SET Z=0
C T = TEMPERATURE (C) REAL FORMAT
C S = SALINITY (8/00) REAL FORMAT
C TALK = TITRATION ALKALINITY (10-6 EQ/KG) REAL FORMAT
C TCO2 = TITRATION TOTAL CO2 (10-6 M/KG) REAL FORMAT
C
C THE FOLLOWING ARRAY CO2X IS RETURNED TO THE MAIN PROGRAM.
C
C CO2X(1) = PCO2 (10-6 ATM)
C (2) = CO3= (10-6 M/KG)
C (3) = HCO3- (10-6 M/KG)
C (4) = H2CO3* (10-6 M/KG)
C (5) = AH
C (6) = PH
C (7) = ICF (10-6 (M/KG)/(M/KG))
C (8) = KB (LYMAN)
C (9) = K1 (MEHRBACH ET AL)
C (10) = K2 (MEHRBACH ET AL)
C (11) = KSP CALCITE, P = 1 ATM
C (12) = KSP CALCITE, P = INSITU
C (13) = CO3= (CALCITE)
C (14) = KSP ARAGONITE, P = 1 ATM
C (15) = KSP ARAGONITE, P = INSITU
C (16) = CO3= (ARAGONITE)
C
C SUBROUTINE PCO2X(Z,T,S,TALK,TCO2,CO2X)
C INTEGER Z
C REAL K1,K2,KB,KCALP1,KCALPT,KARGP1,KARGPT
C DIMENSION CO2X(16)
C DATA BAS10/2.382585/
C TKT=273.15+T
C K1=EXP(BAS10*(13.7281-3.1334E-2*TKT-3233.76/TKT-1.3E-5*8*TKT
C +0.1832*SQRT(S)))
C K2=EXP(BAS10*(-9371.9643-1.671221*TKT-8.22513*8-10.3882*ALOG10(S)
C +128375.28/TKT+2194.3855*ALOG10(TKT)+8.8944E-4*8*TKT
C +5817.11*ALOG10(S)/TKT-2.13648/TKT))
C KB=EXP(BAS10*(-9.26+8.8888*8+8.81*T))
C
C PRESSURE EFFECTS
C
C P=1.+Z*8.1827/1.028
C CP=(P-1.)/(TKT*83.143)
C IP(P,80.1.)GOTO60
C K1=K1*EXP((24.2-.885*T)*CP)
C
C K2=K2*EXP((16.4-.848*T)*CP)
C KB=KB*EXP((27.5-.893*T)*CP)
C
C TB=4.186E-4*8/33.8
C TK=TK/100.
C BS=8.823517+(-8.823656+8.8847836*TK)*TK
C ALPHS = SOLUBILITY OF CO2 IN SEAWATER, WEISS
C ALPHS=EXP(-88.2485+93.4517/TK+23.3585*ALOG(TK)+8*8S)
C
C SOLVE FOR AH BY ITERATION
C
C C1=K1/2.8
C C2=1.8-4.8*K2/K1
C C4=TB*KB
C AHT=8.74E-8
C DO 300 ICHT=1,100
C A=TALK-C4/(KB+AHT)
C X=A/TCO2
C AH1=C1/X*(1.8-X*SQRT(1.8+C2*X*(X-2.+8)))
C IP(8.5E-4,GE.ABS(1.-AHT/AH1)) GOTO 400
C 300 AHT=AH1
C 400 CONTINUE
C
C CO2X(1)=AH*(AH1/K1)/(ALPHS*(1.8+2.8*K2/AH1))
C CO2X(2)=(A-TCO2)/(1.8-(AH1+AH1)/(K1*K2))
C CA=1.826E-2*8/33.8
C CO2X(3)=TCO2/(1.+AH1/K1+K2/AH1)
C CO2X(4)=TCO2/(1.8+K1/AH1+K1*K2/(AH1+AH1))
C CO2X(5)=AH1
C CO2X(6)=-ALOG(AH1)/BAS10
C CO2X(7)=CA-CO2X(2)
C CO2X(8)=KB
C CO2X(9)=K1
C CO2X(10)=K2
C CV=EXP((38.8-8.2*T)*CP)
C KCALP1=(-34.432-39.866*8*(1./3.))+118.21*ALOG10(S)
C -7.5732E-6*TKT*TKT)=1.8-7
C KCALPT=KCALP1*CV
C COSCAL=KCALPT/CA
C CO2X(11)=KCALP1
C CO2X(12)=KCALPT
C CO2X(13)=COSCAL
C DV=EXP((33.3-8.22*T)*CP)
C KARGP1=1.45*KCALP1
C KARGPT=KARGP1*DV
C COSARG=KARGPT/CA
C CO2X(14)=KARGP1
C CO2X(15)=KARGPT
C CO2X(16)=COSARG
C
C RETURN
C END

```

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VI. GEOSECS Station Maps

Figure 1 Atlantic Ocean

Figure 2 Pacific Ocean

Figure 3 Indian Ocean

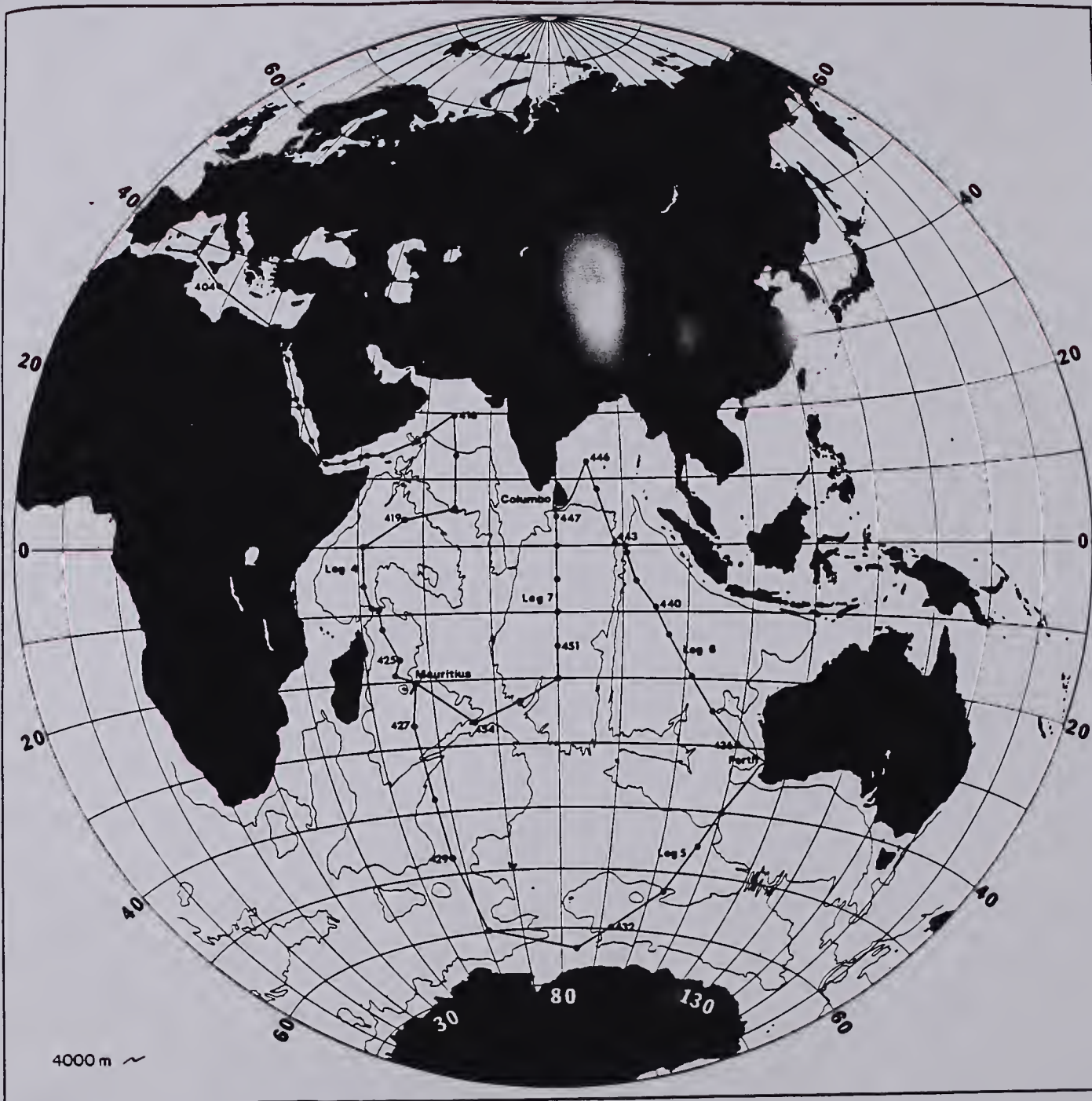
Figure 1



Figure 2



Figure 3



VII. DEPTH PROFILES

Alkalinity vs. Depth:

- Figure 4 North Atlantic; north of the equator and south of 36°N
- Figure 5 South Atlantic; south of the equator and north of 45°S
- Figure 6 North Pacific; north of the equator
- Figure 7 South Pacific; south of the equator and north of 45°S
- Figure 8 North Indian; north of the equator
- Figure 9 South Indian; south of the equator and north of 45°S
- Figure 10 Antarctic; south of 45°S

Total CO₂ Concentration vs. Depth:

- Figure 11 North Atlantic; north of the equator and south of 36°N
- Figure 12 South Atlantic; south of the equator and north of 45°S
- Figure 13 North Pacific; north of the equator
- Figure 14 South Pacific; south of the equator and north of 45°S
- Figure 15 North Indian; north of the equator
- Figure 16 South Indian; south of the equator and north of 45°S
- Figure 17 Antarctic; south of 45°S

CO₃⁼ Concentration vs. Depth:

- Figure 18 North Atlantic; north of the equator and south of 36°N
- Figure 19 South Atlantic; south of the equator and north of 45°S
- Figure 20 North Pacific; north of the equator
- Figure 21 South Pacific; south of the equator and north of 45°S
- Figure 22 North Indian; north of the equator
- Figure 23 South Indian; south of the equator and north of 45°S
- Figure 24 Antarctic; south of 45°S

FIG.4 GEOSECS NORTH ATLANTIC

NORTH OF EQUATOR

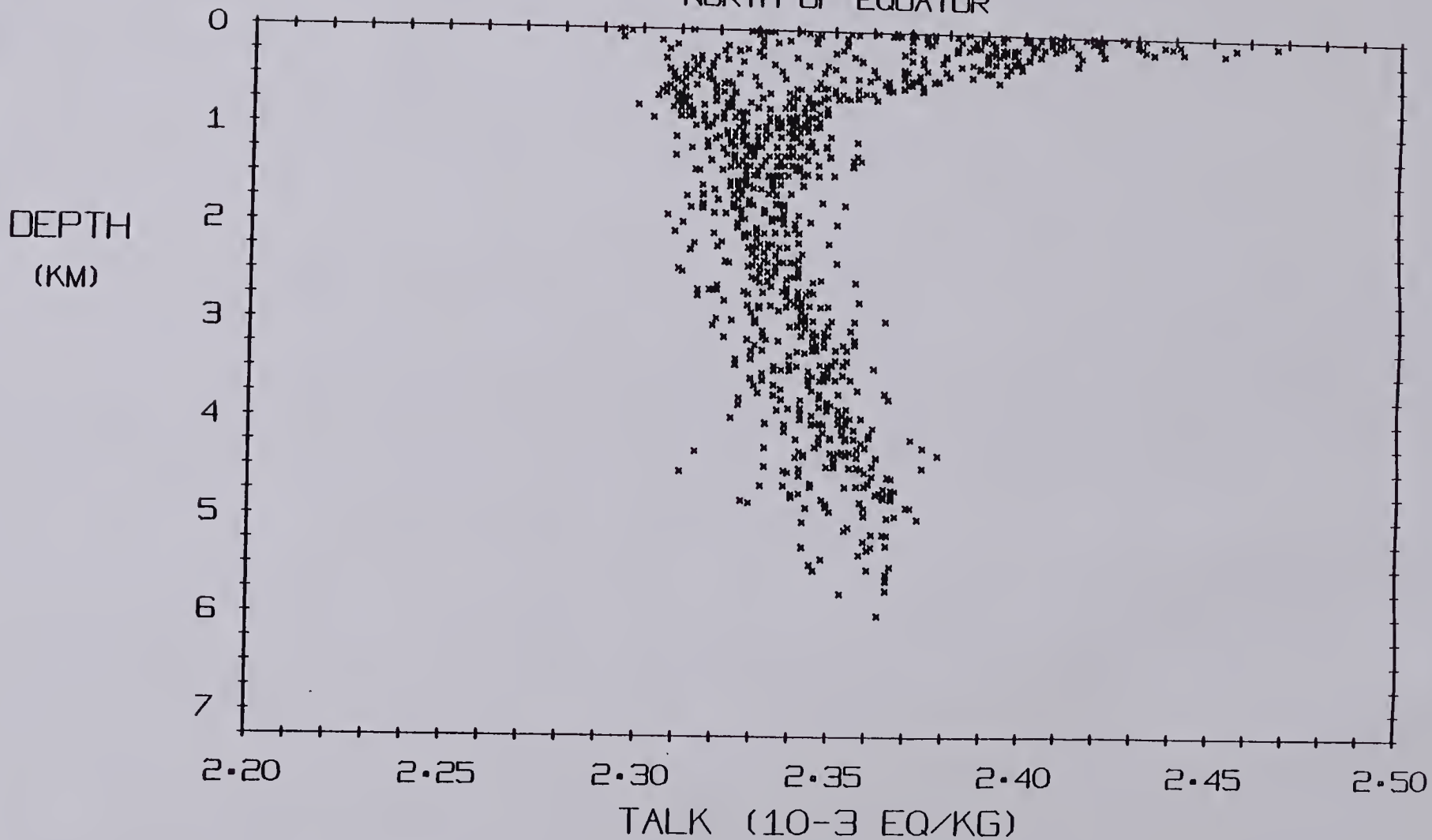


FIG. 5 GEOSECS SOUTH ATLANTIC

SOUTH OF EQUATOR, NORTH OF 45 S

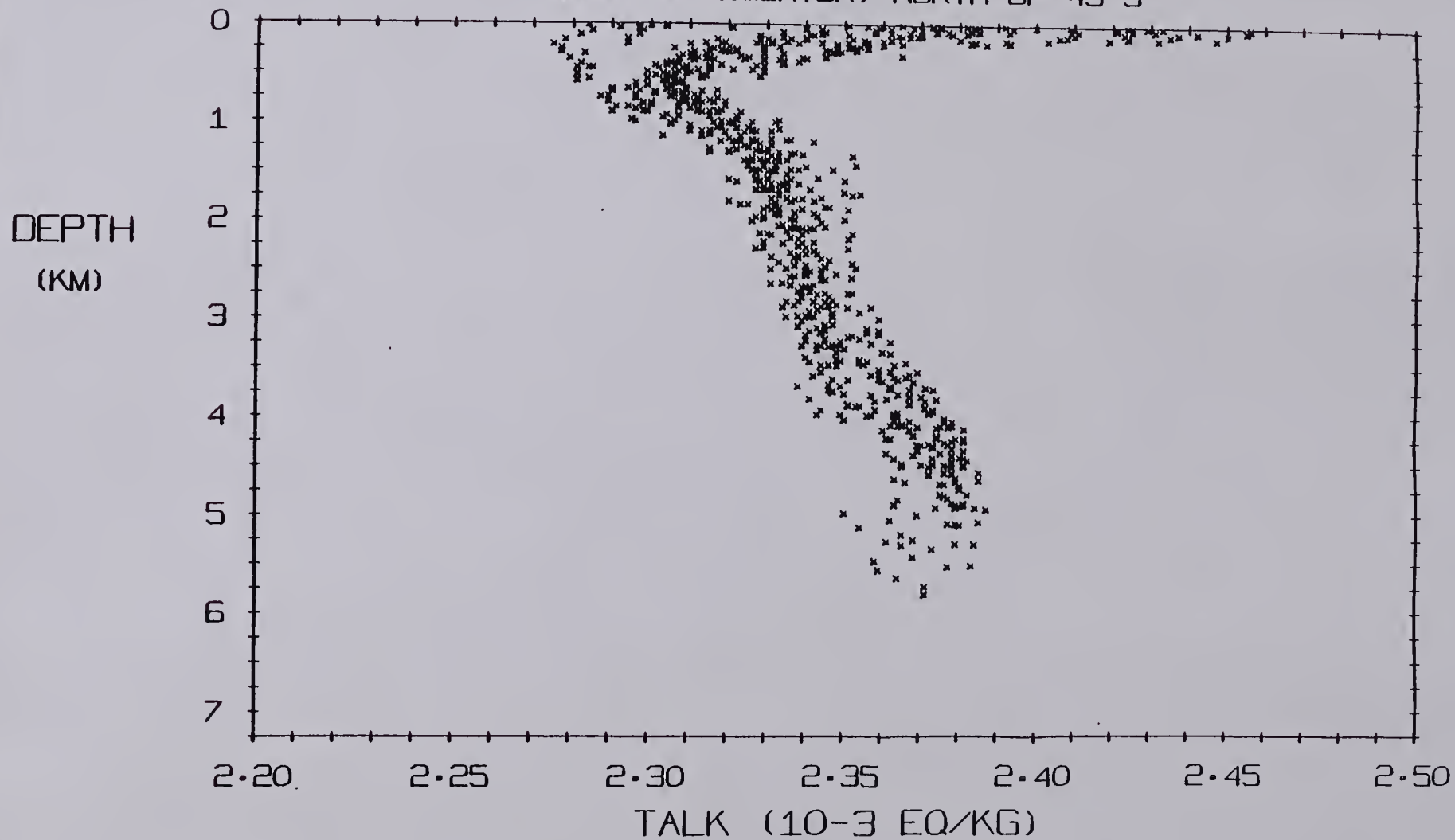


FIG. 6 GEOSECS NORTH PACIFIC

NORTH OF EQUATOR

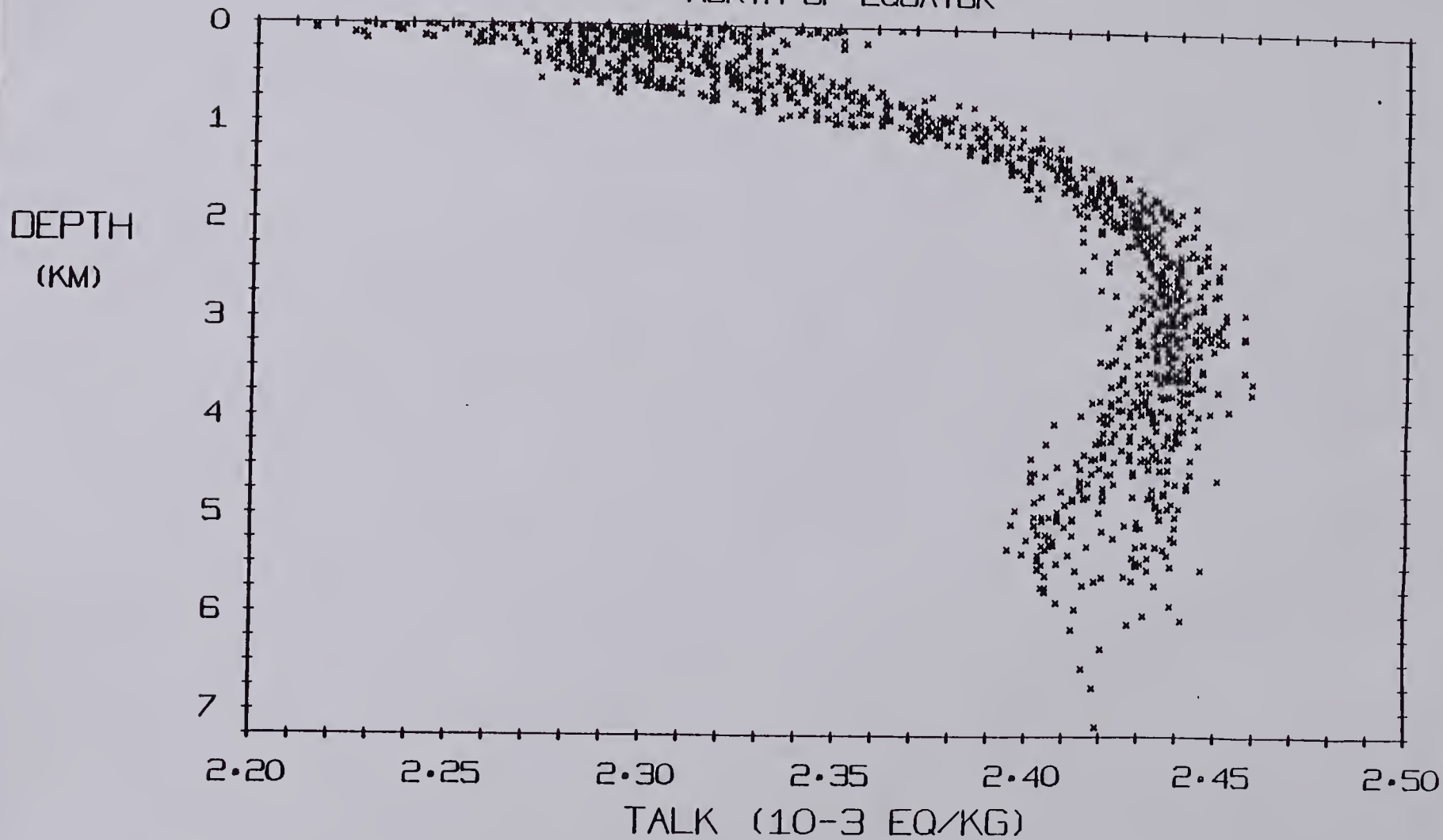


FIG. 7 GEOSECS SOUTH PACIFIC

SOUTH OF EQUATOR, NORTH OF 45 S

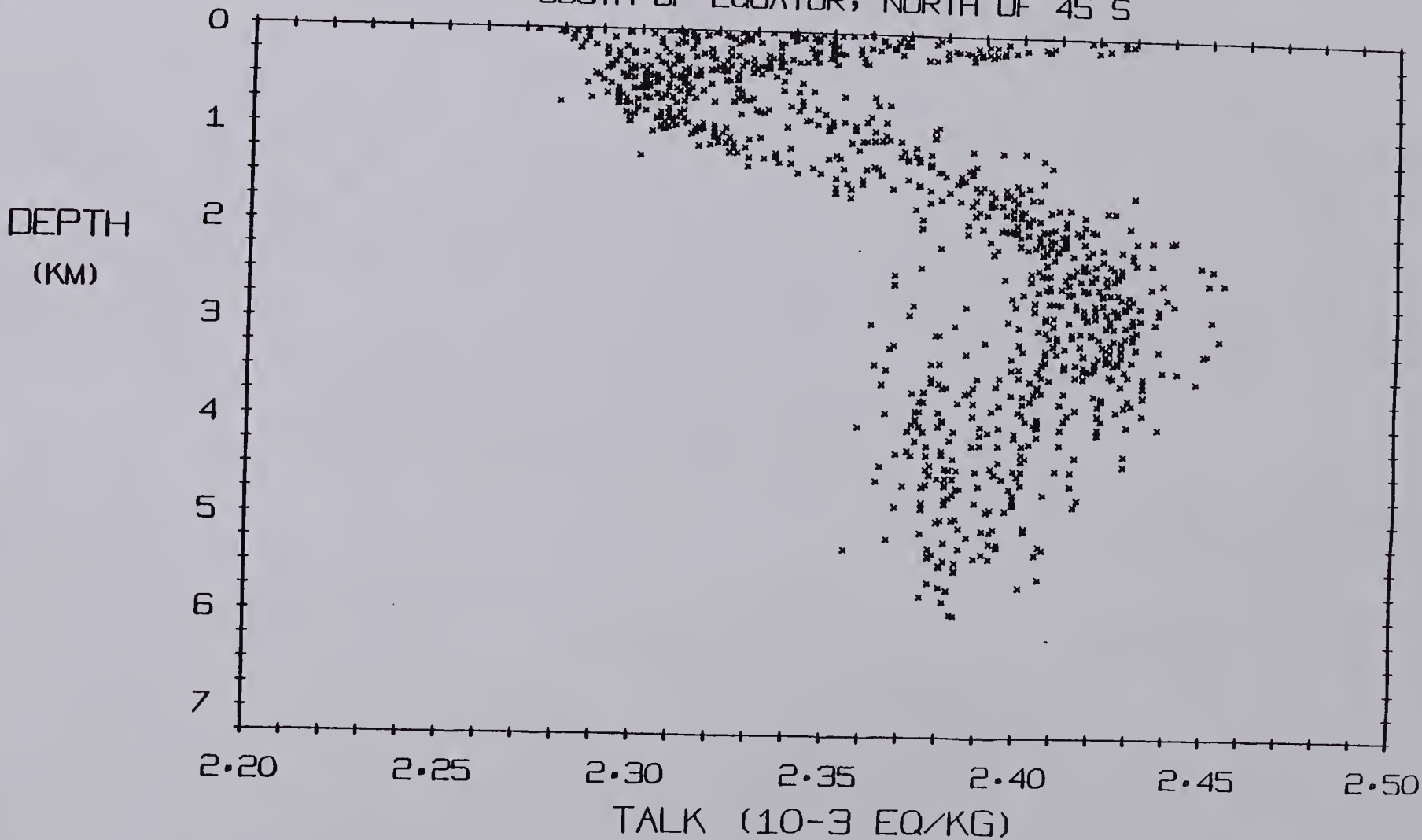


FIG. 8 GEOSECS NORTH INDIAN
NORTH OF EQUATOR

503

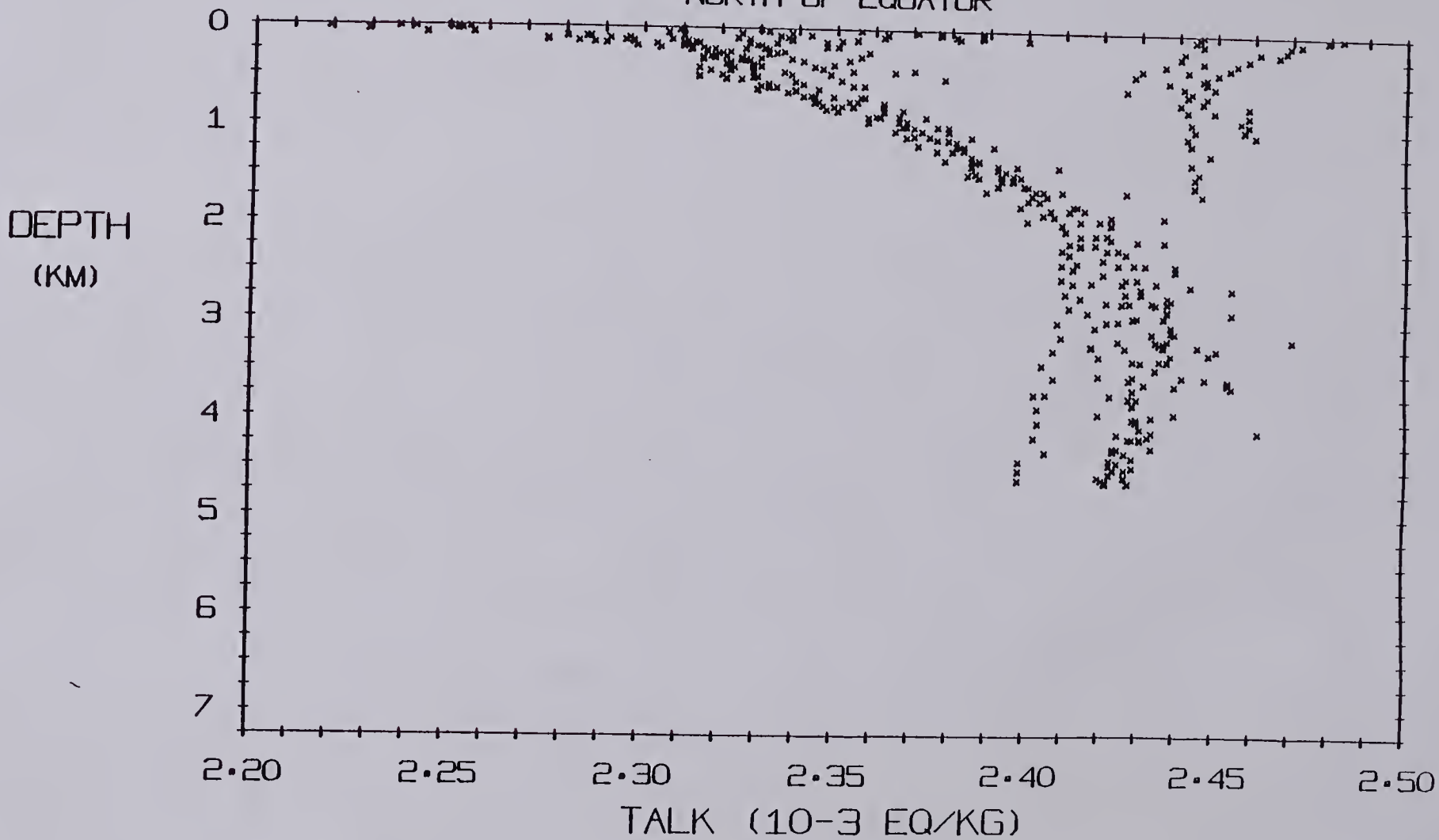


FIG. 9 GEOSECS SOUTH INDIAN

187

SOUTH OF EQUATOR, NORTH OF 45 S

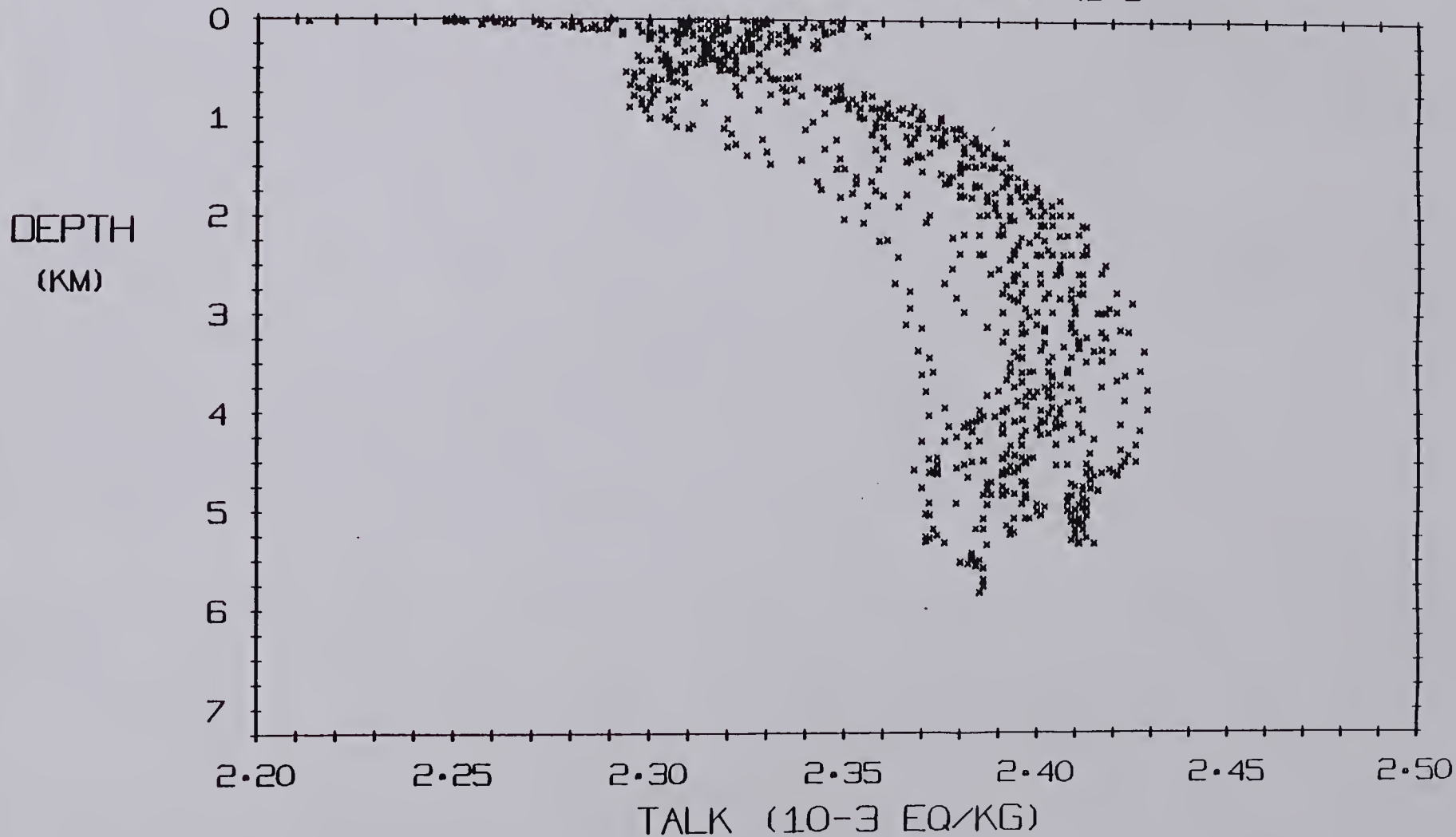


FIG.10 GEOSECS ANTARCTIC OCEAN
SOUTH OF 45 S

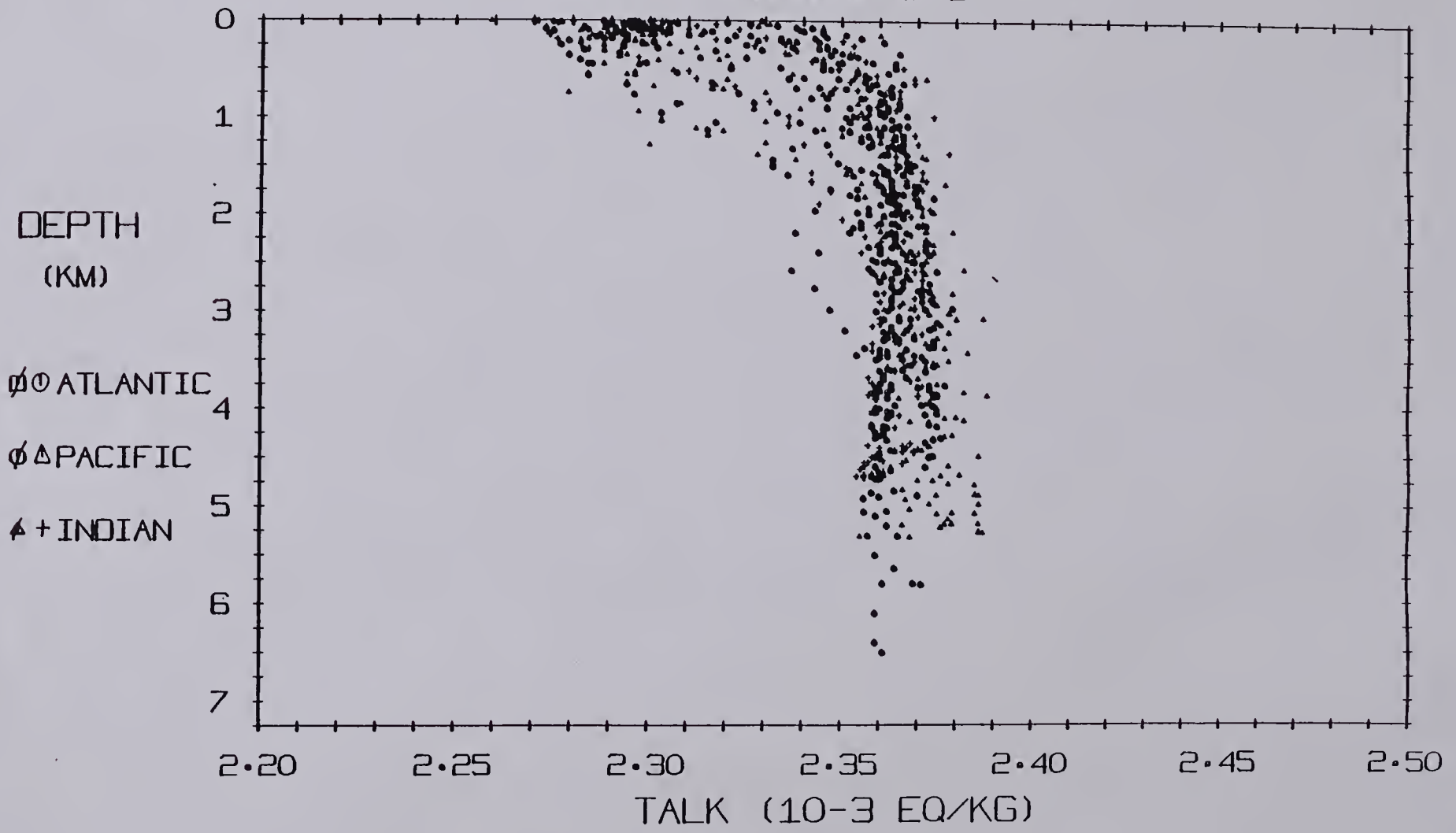


FIG. 11 GEOSECS NORTH ATLANTIC
NORTH OF EQUATOR

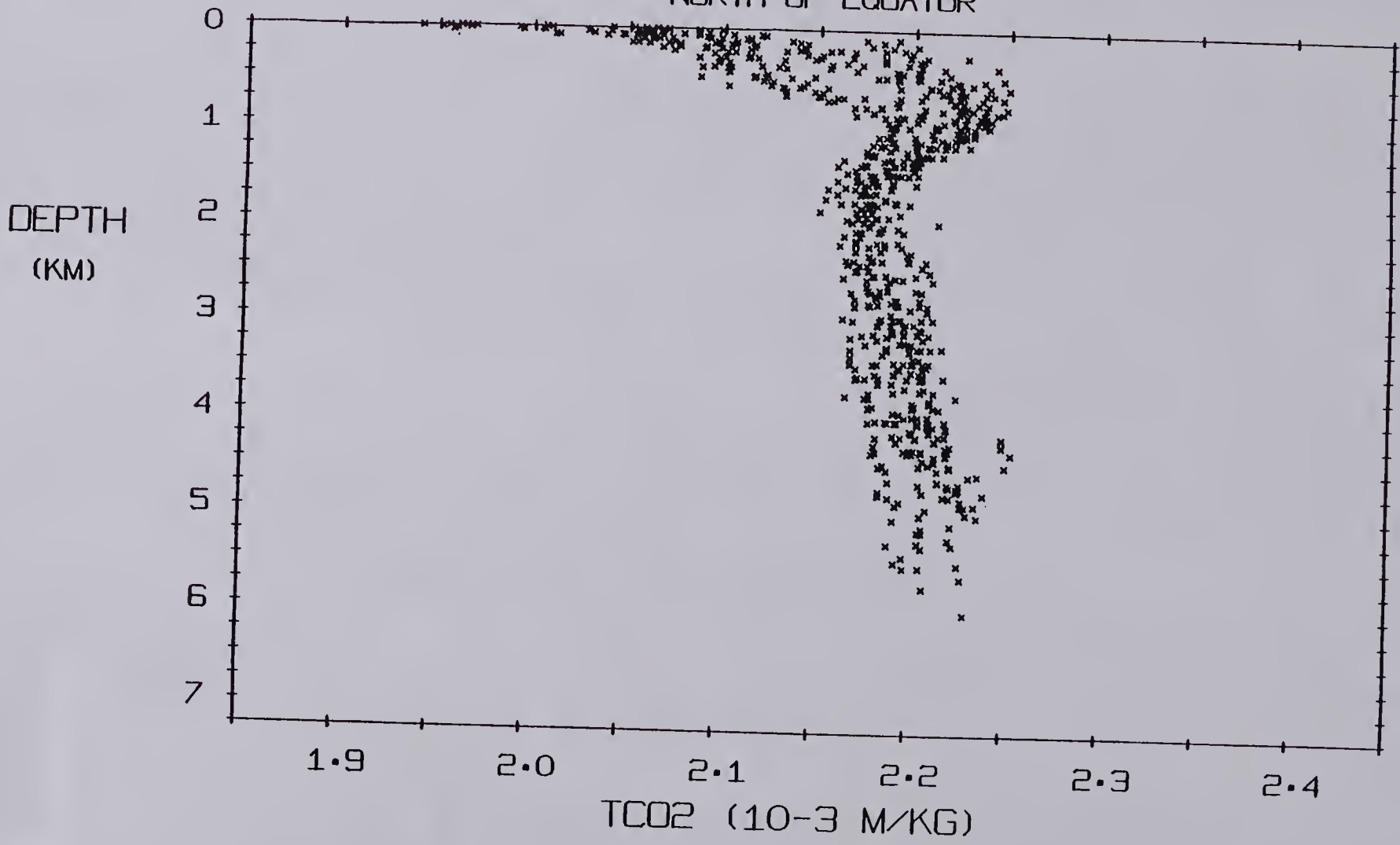


FIG.12 GEOSECS SOUTH ATLANTIC
SOUTH OF EQUATOR, NORTH OF 45 S

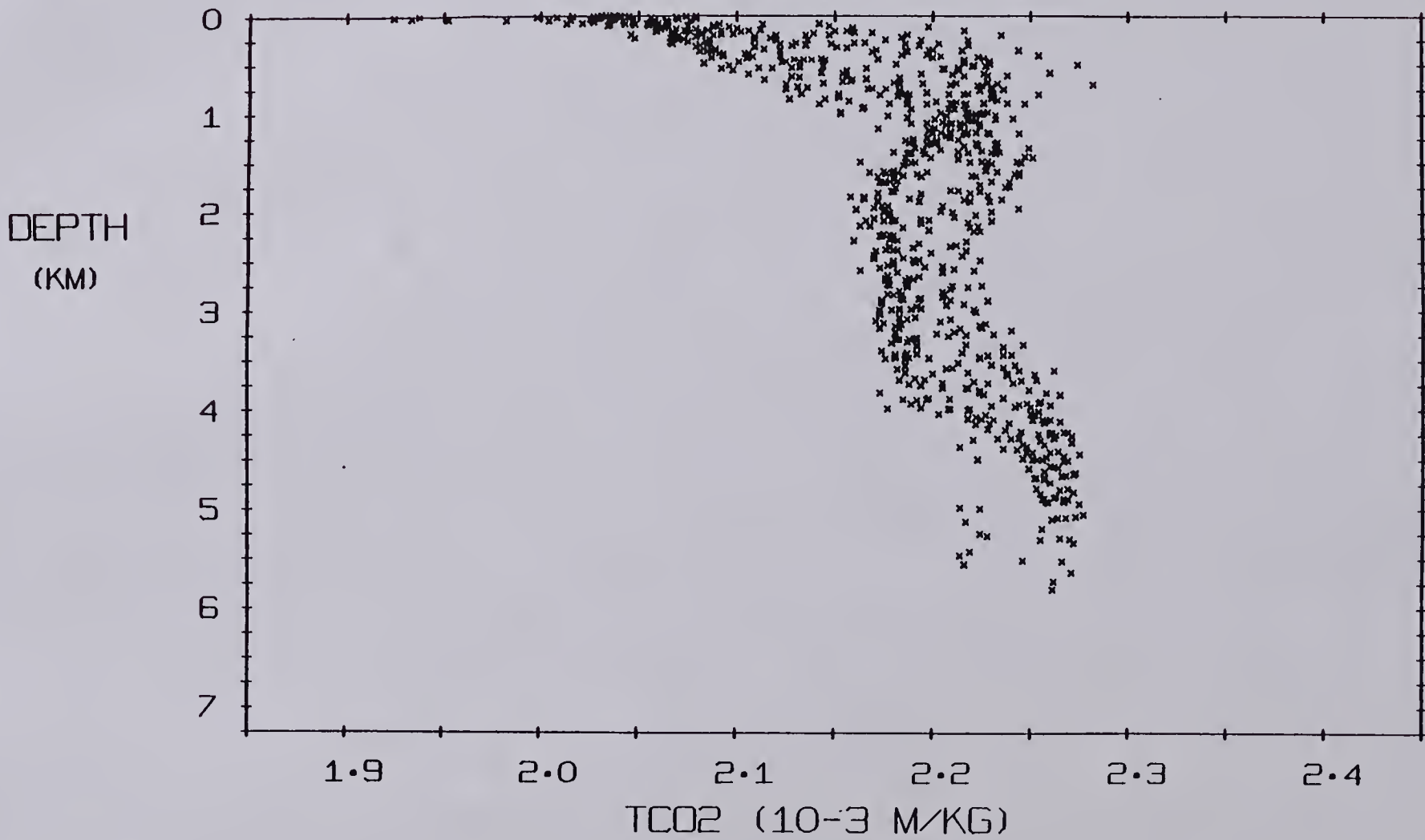


FIG. 13 GEOSECS NORTH PACIFIC
NORTH OF EQUATOR

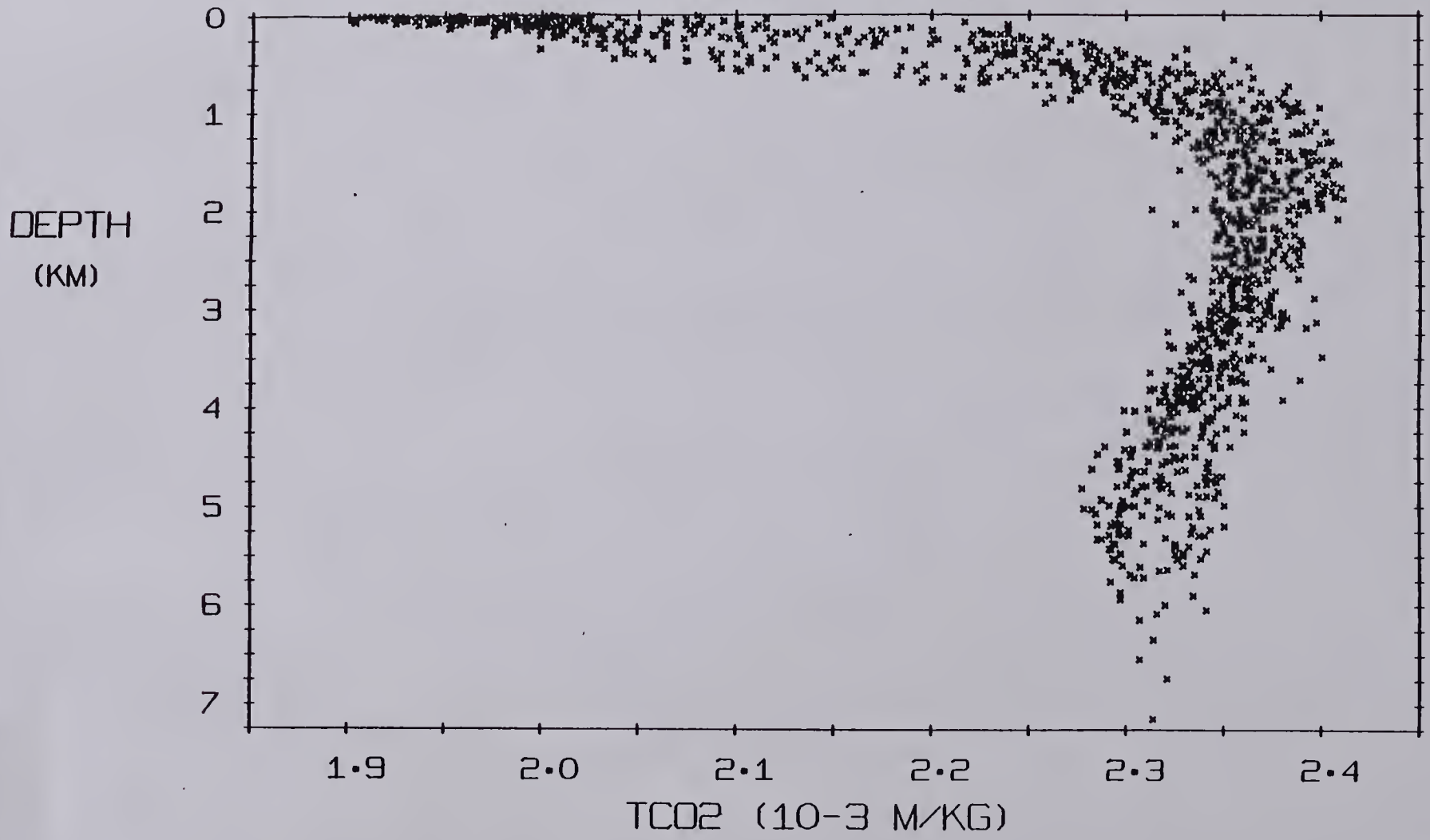


FIG.14 GEOSECS SOUTH PACIFIC
SOUTH OF EQUATOR, NORTH OF 45 S

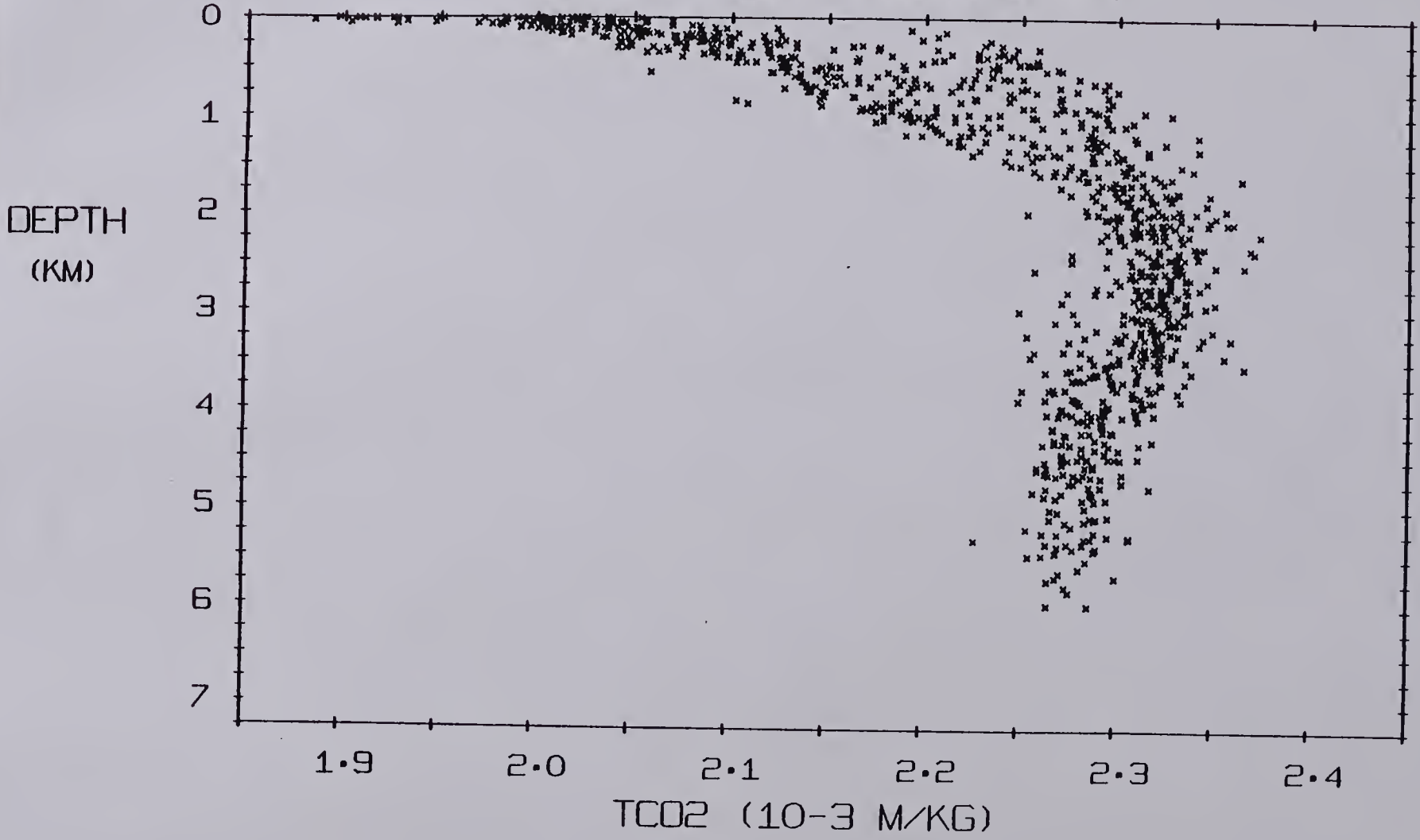


FIG.15 GEOSECS NORTH INDIAN
NORTH OF EQUATOR

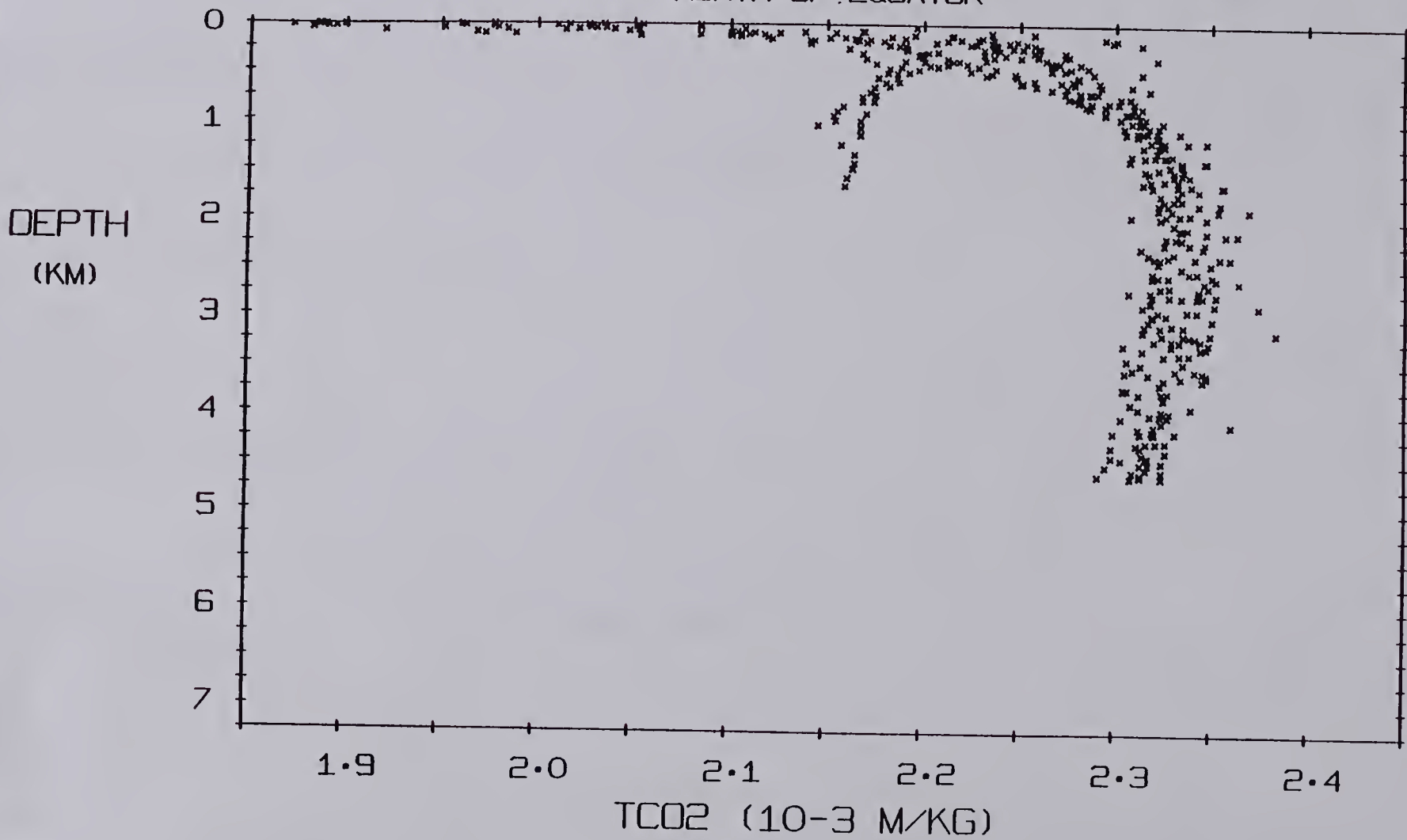


FIG. 16 GEOSECS SOUTH INDIAN
SOUTH OF EQUATOR, NORTH OF 45 S

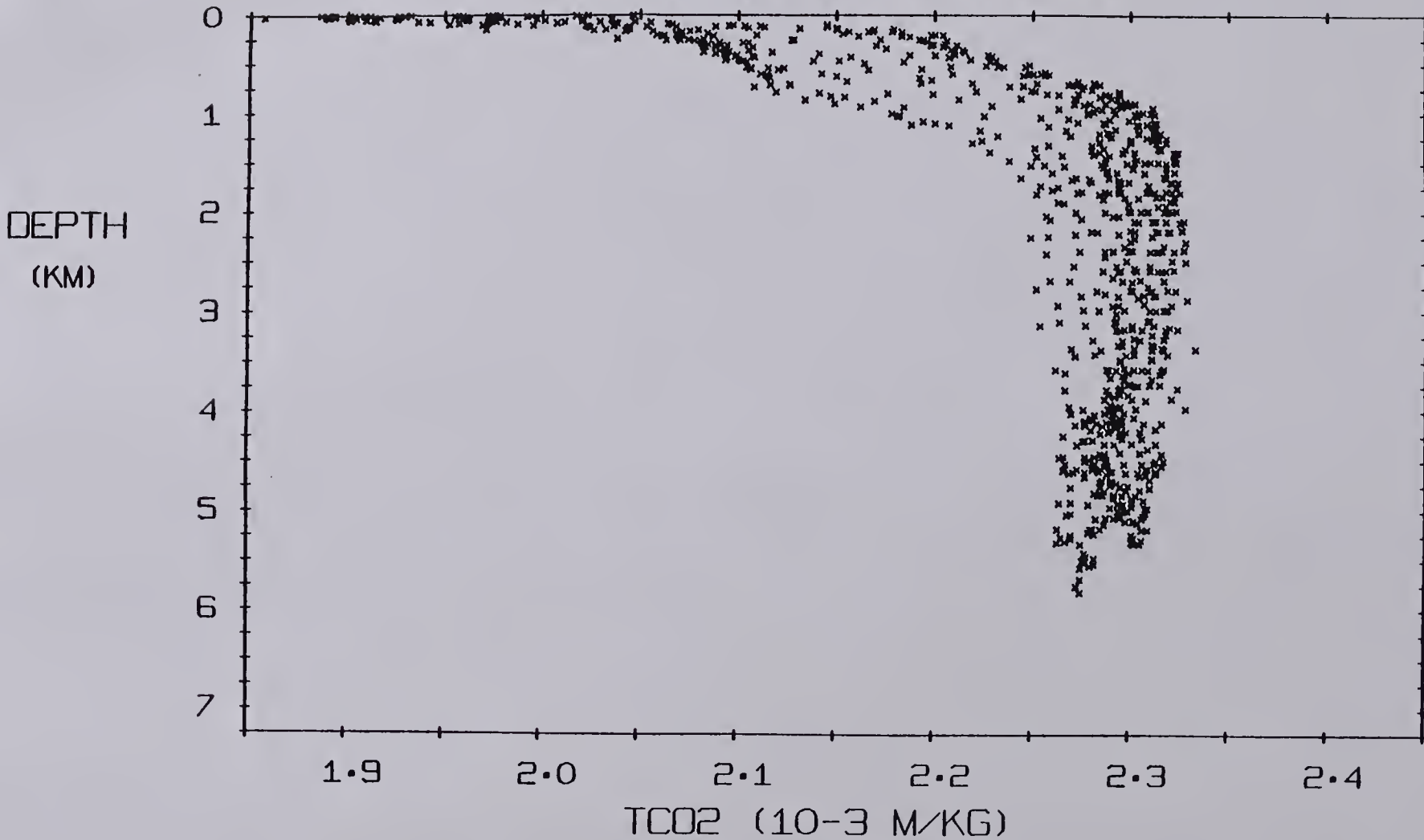


FIG.17 GEOSECS ANTARCTIC OCEAN

SOUTH OF 45 S

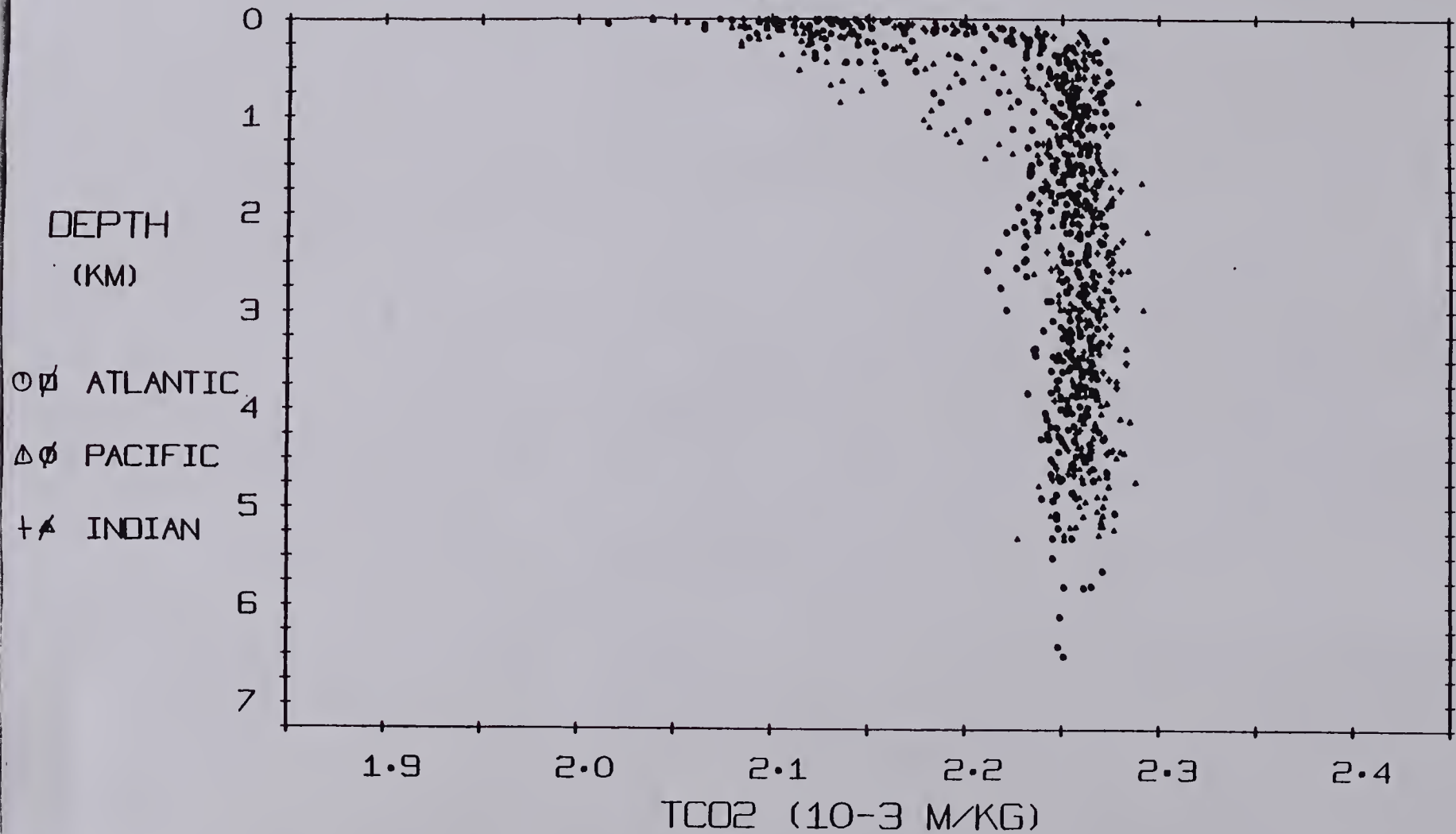


FIG. 18 GEOSECS NORTH ATLANTIC
NORTH OF EQUATOR

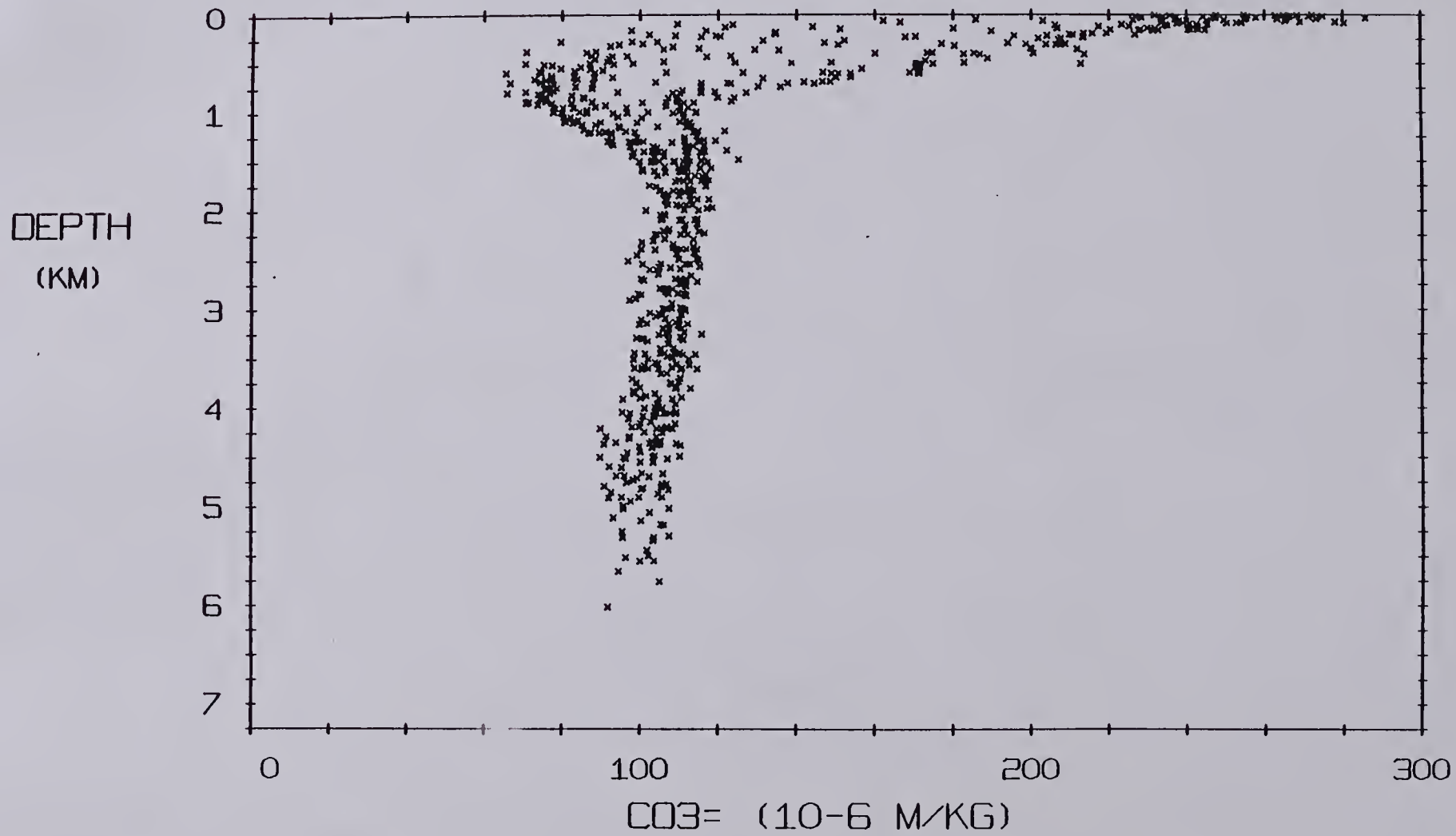


FIG.19 GEOSECS SOUTH ATLANTIC

SOUTH OF EQUATOR, NORTH OF 45 S

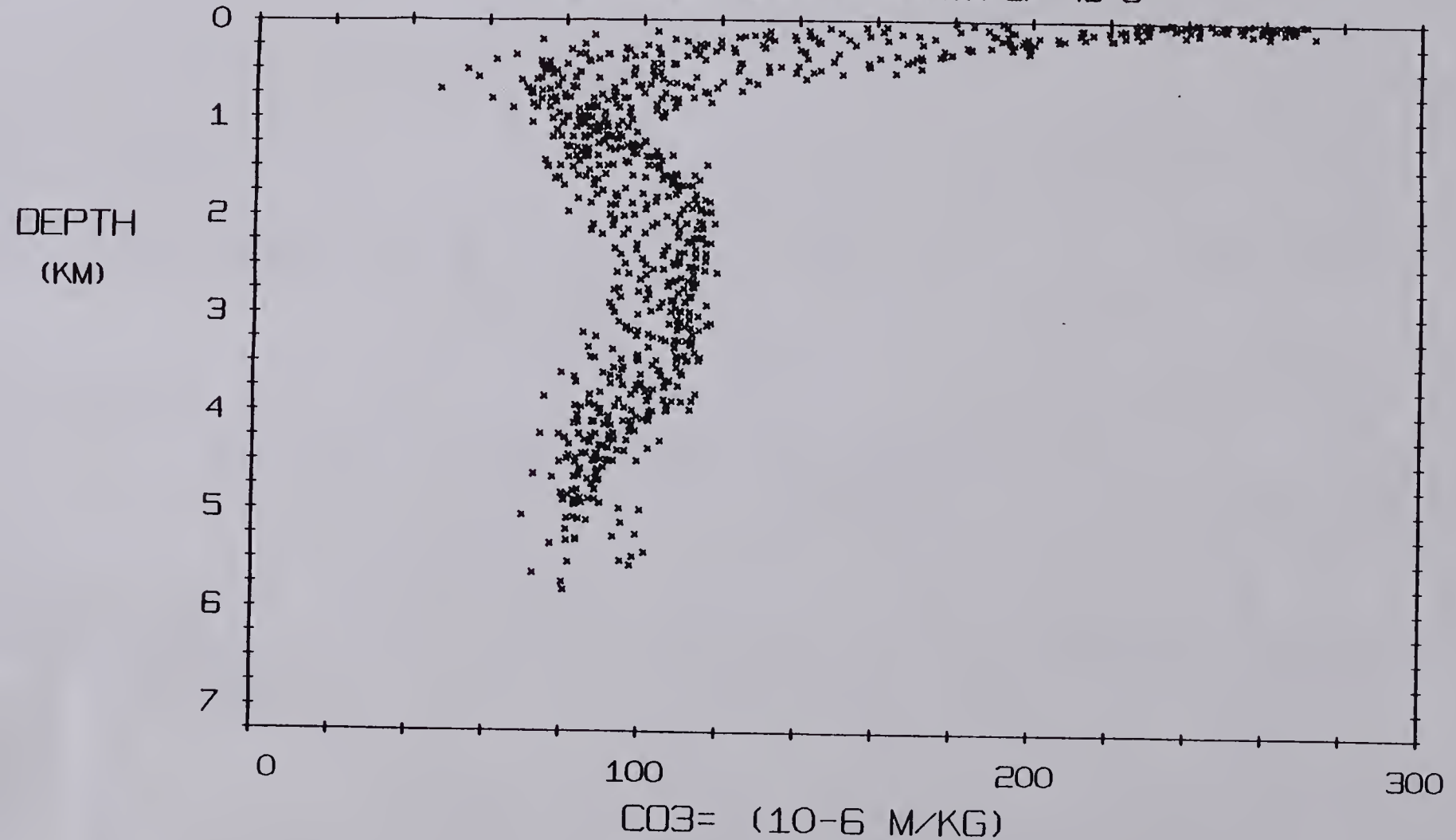
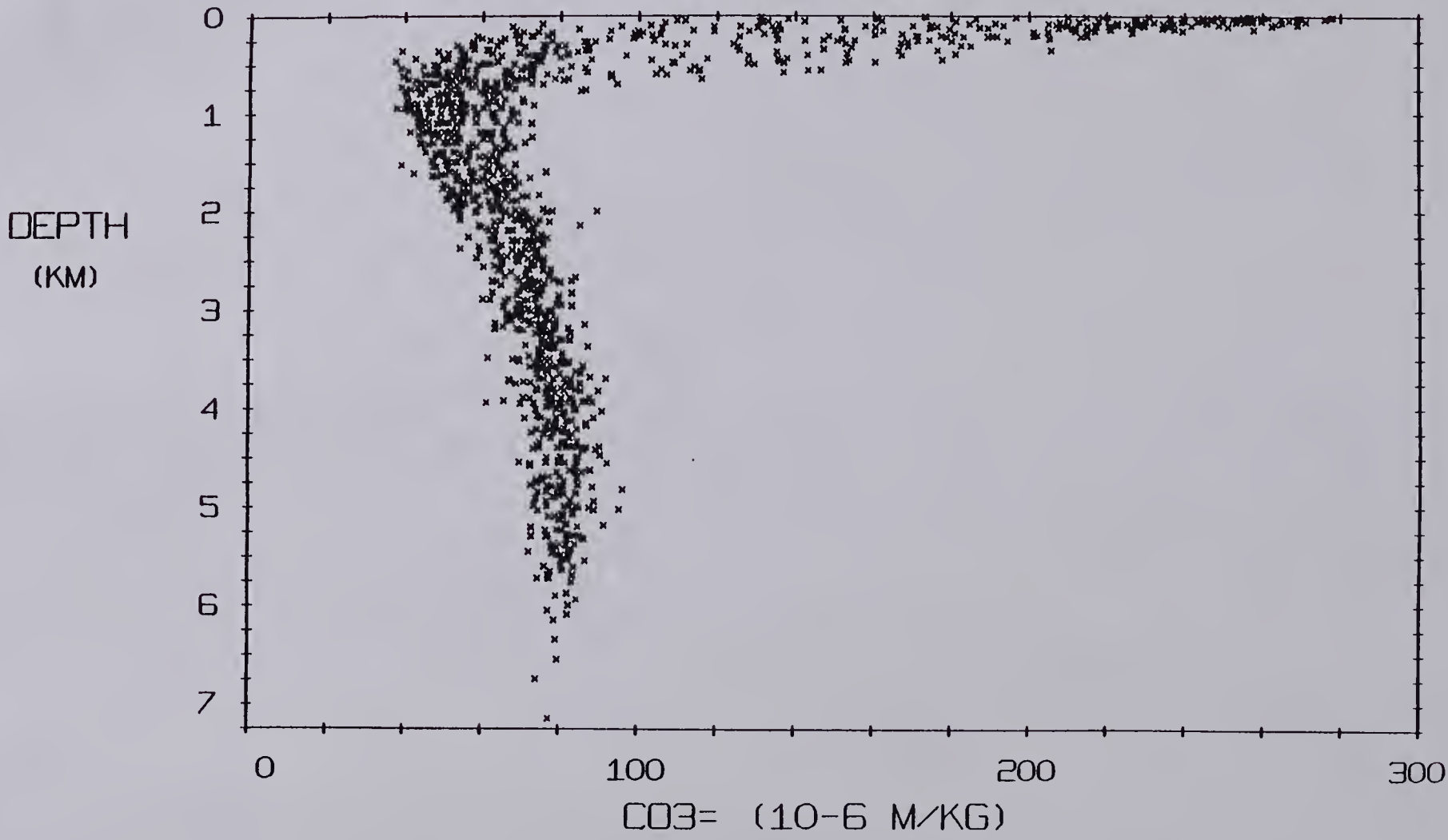


FIG. 20 GEOSECS NORTH PACIFIC
NORTH OF EQUATOR



1.8.71

FIG. 21 GEOSECS SOUTH PACIFIC
SOUTH OF EQUATOR, NORTH OF 45 S

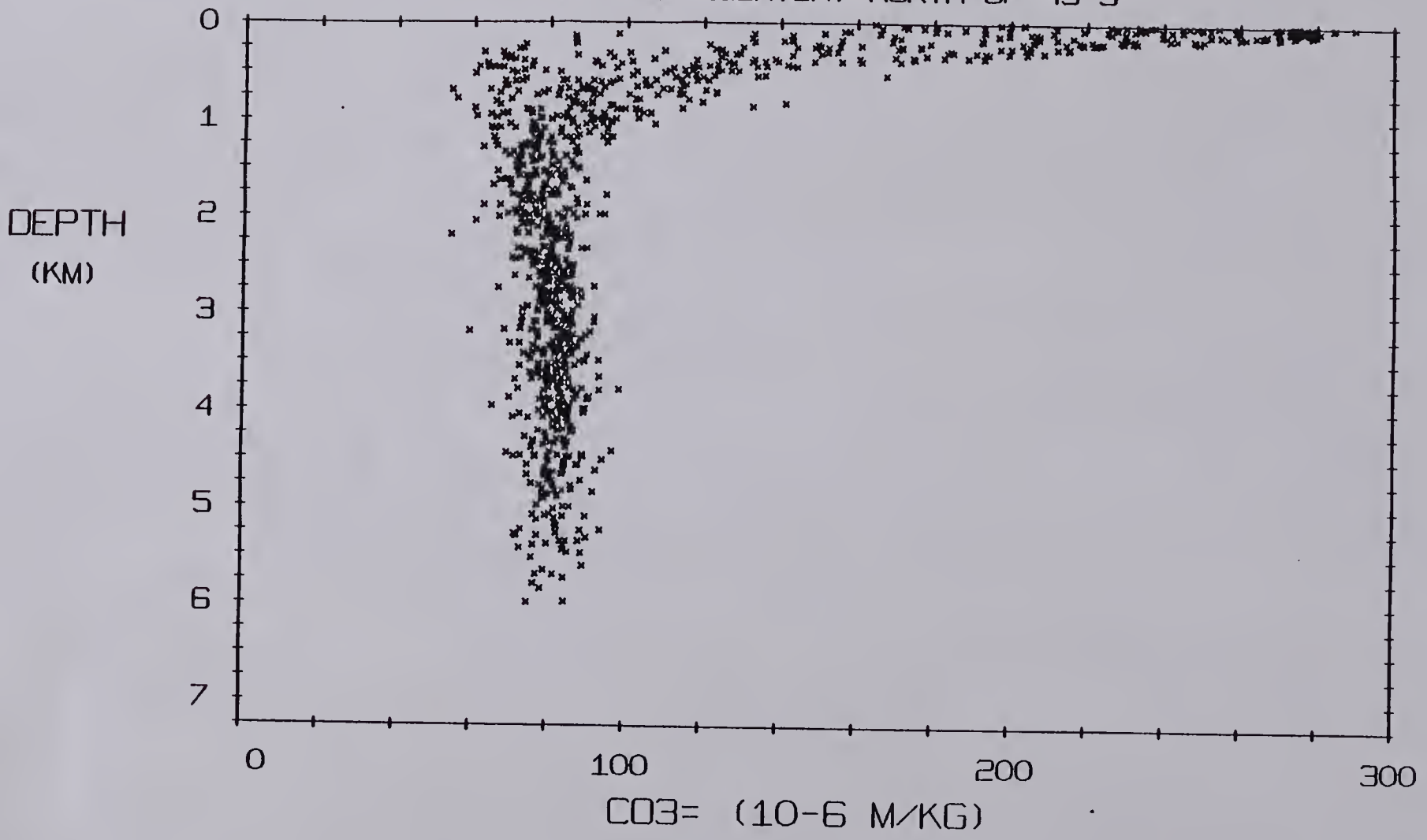


FIG. 22 GEOSECS NORTH INDIAN
NORTH OF EQUATOR

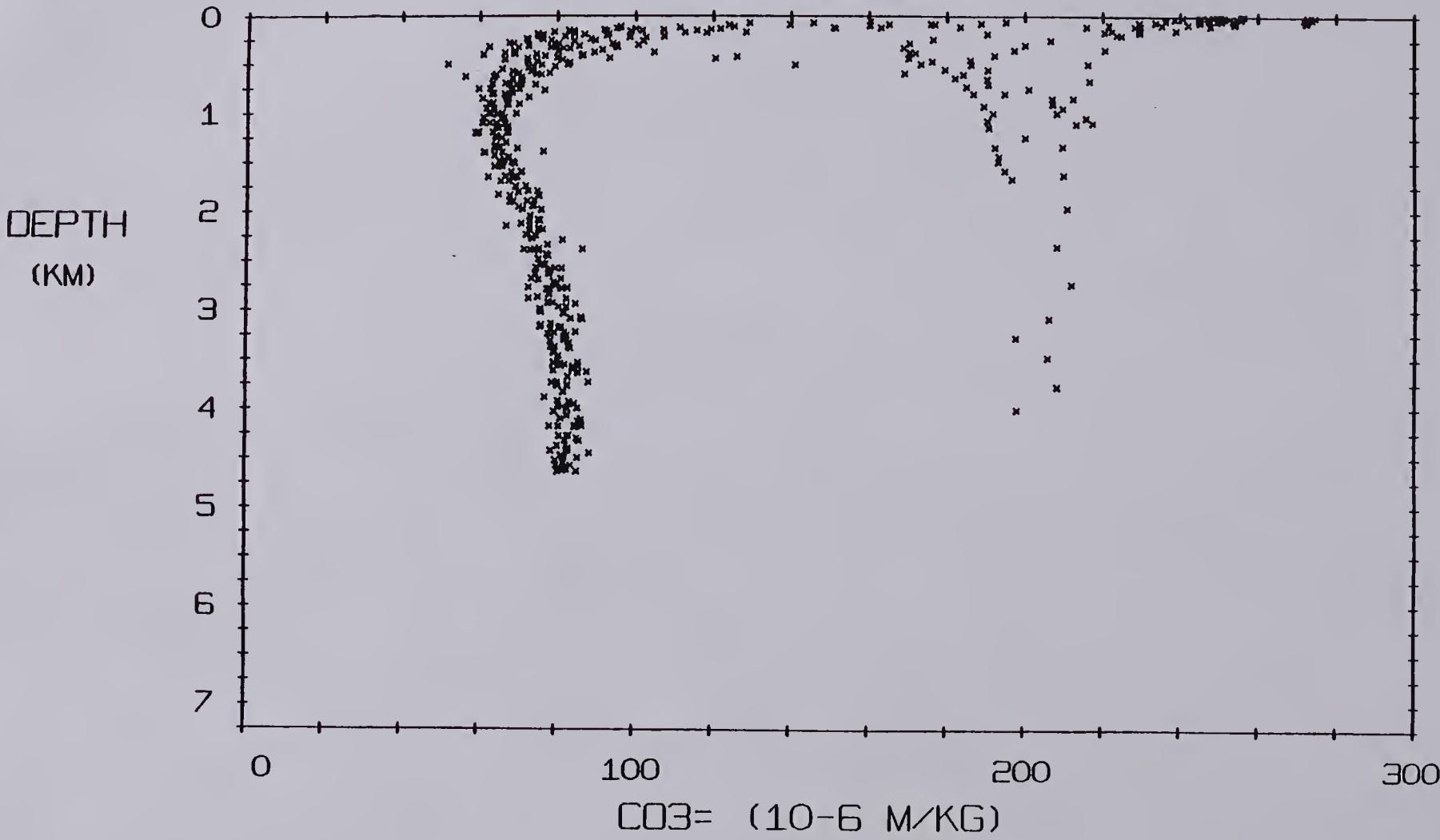


FIG. 23 GEOSECS SOUTH INDIAN
SOUTH OF EQUATOR, NORTH OF 45 S

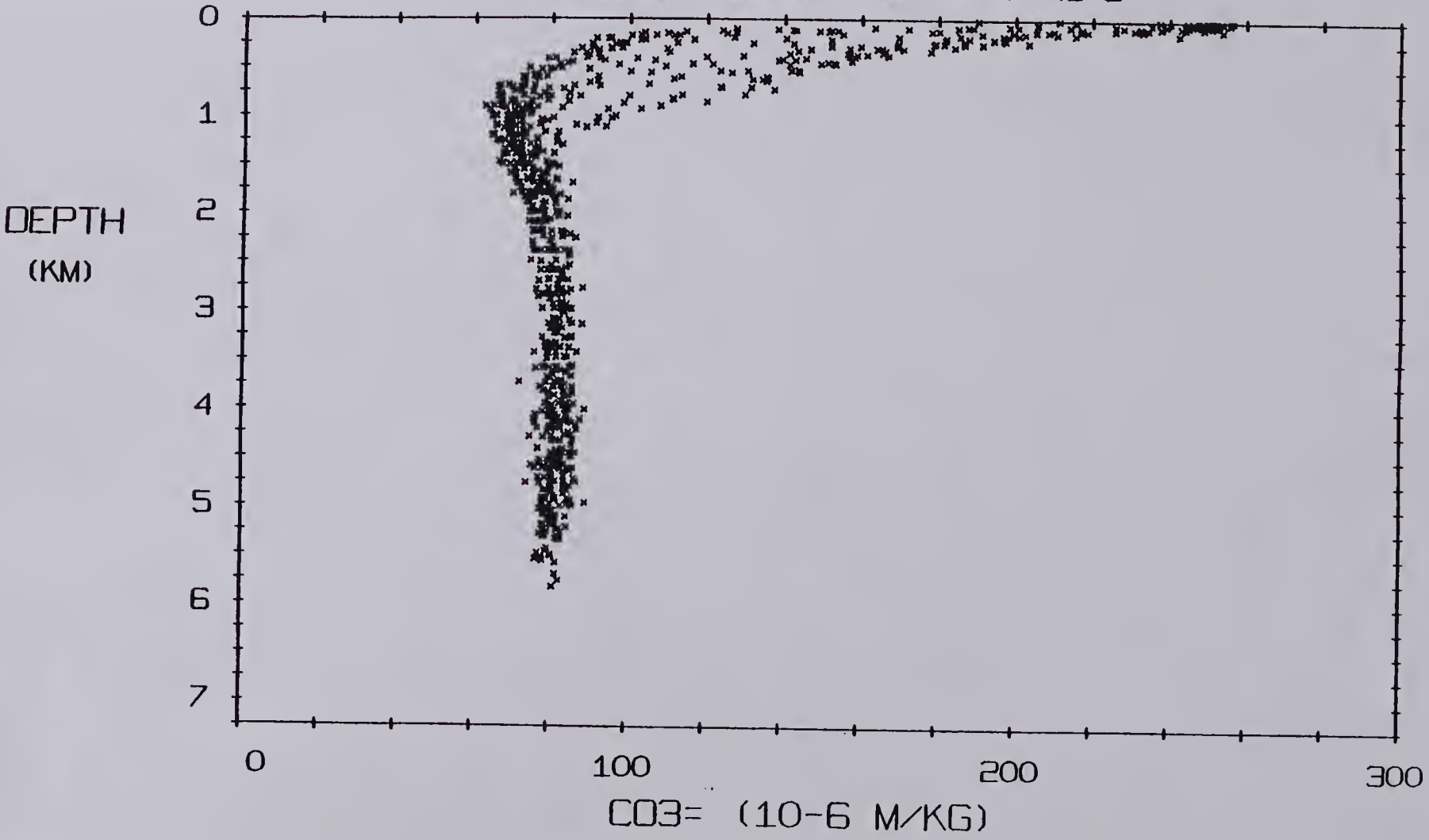
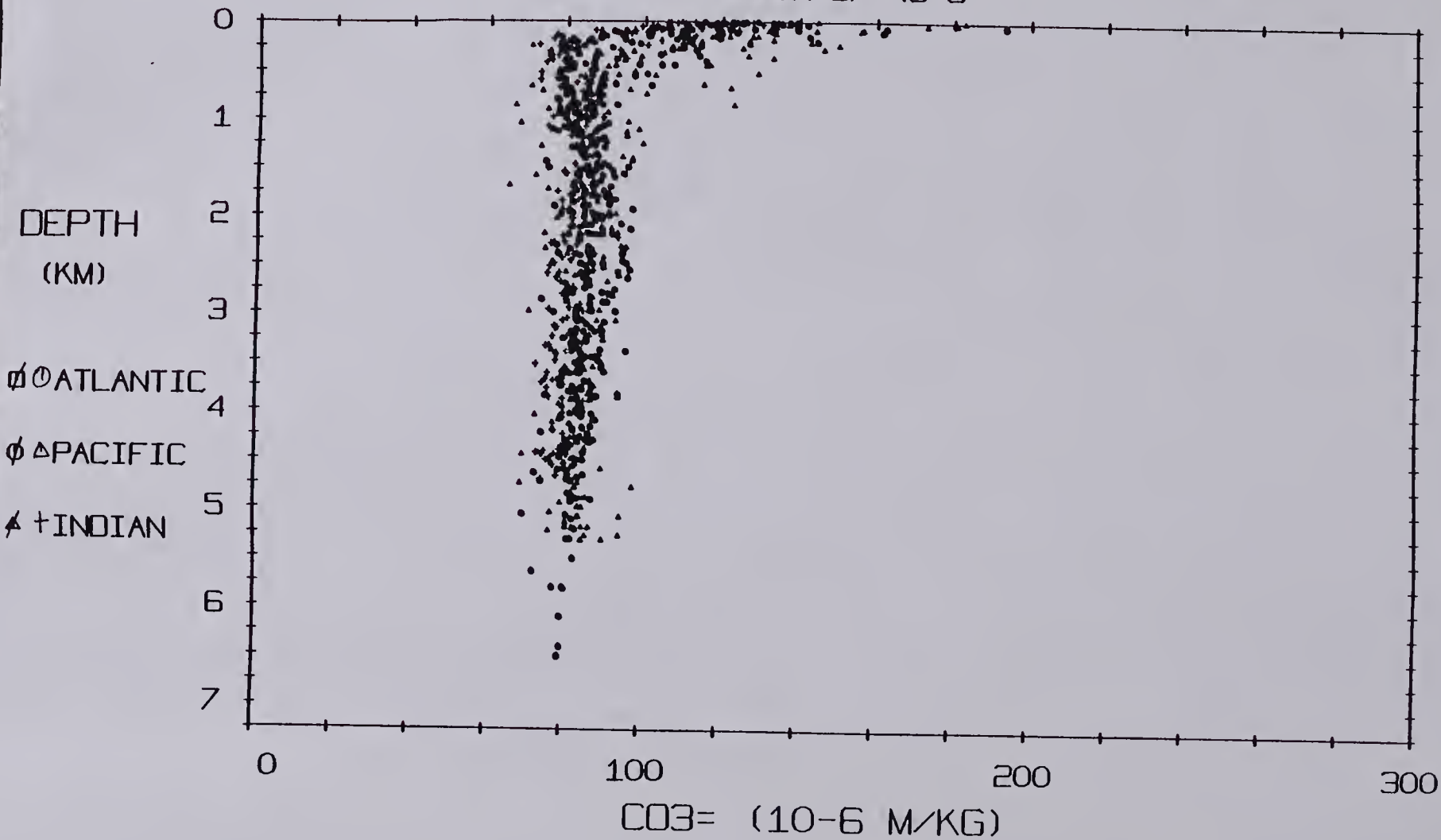


FIG. 24 GEOSECS ANTARCTIC OCEAN

7.8.24

SOUTH OF 45 S



VIII. MEASURED AND CALCULATED QUANTITIES OF CARBONATE CHEMISTRY

Table 1

The Atlantic Ocean

CARBONATE REPORT

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 31 1 22 9 72 0755 27 0.0 N 53 32.0 W 6055
 31 3 22 9 72 1705 27 0.3 N 53 30.0 W
 31 5 23 9 72 0316 27 0.0 N 53 31.0 W 6039

GC CO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/00)	TALK (EQ/KG)	TIT (M/KG)	GC (M/KG)	*CALC PARAMETERS P=1ATM.T=INSITU*				CALC PARAMETERS P,T=INSITU				DELTA CO3- (ARRG) (M/KG)	DELTA CO3- (M/KG)				
							PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)			AM (E-9)	PH	ICP (E-6)	
601	1	27.442	36.901	2426	2041.	*	354.6	9.4	1759.4	272.2	8.253	*	9.4	1759.4	272.2	5.581	8.253	2.944	227.4	207.3
602	29	26.992	36.923	2421.	2057.	* 2044	380.1	10.2	1700.9	257.9	8.227	*	10.2	1700.9	257.9	5.935	8.227	2.791	212.9	192.7
603	60	22.921	36.790	2410.	2070.	* 2037	355.0	10.5	1827.3	240.2	8.241	*	10.5	1827.3	240.2	5.768	8.239	2.588	194.7	174.3
604	100	21.214	36.943	2431.	2090.	* 2056	346.6	10.8	1852.4	234.9	8.246	*	10.8	1852.6	234.6	5.716	8.243	2.541	189.8	168.6
605	152	19.570	36.710	2414.	2070.	* 2088	300.7	9.8	1819.5	240.7	8.291	*	9.7	1820.8	240.3	5.182	8.286	2.586	194.2	173.6
606	202	18.151	36.470	2397.	2090.	* 2081	341.5	11.6	1876.1	218.3	8.241	*	11.5	1876.7	209.8	5.836	8.234	2.243	163.3	142.5
608	301	17.123	36.403	2355.	2112.	* 2103	350.9	12.2	1900.4	199.3	8.228	*	12.2	1901.2	199.6	6.854	8.218	2.119	151.4	138.4
609	403	16.940	36.375	2355.	2090.	*	305.9	10.9	1882.5	214.6	8.272	*	10.8	1863.6	213.6	5.513	8.259	2.278	165.7	144.5
610	502	15.817	36.157	2376.	2135.	* 2126	401.4	14.6	1940.8	171.7	8.173	*	14.5	1950.8	170.6	6.902	8.156	1.908	121.9	108.4
611	603	13.815	35.831	2365.	2194.	* 2150	425.4	16.4	1985.7	151.9	8.145	*	16.3	1987.1	150.6	7.518	8.124	1.502	101.8	79.2
612	703	11.789	35.561	2351.	2155.	* 2152	427.2	17.6	2002.3	139.1	8.136	*	17.5	2003.9	137.7	7.756	8.110	1.435	87.1	65.0
614	799	9.044	35.331	2340.	2205.	*	520.2	23.3	2072.1	109.6	8.040	*	23.0	2073.7	100.3	9.590	8.018	1.121	56.7	34.3
615	854	8.923	35.261	2346.	2204.	* 2194	510.3	23.2	2072.2	108.7	8.050	*	22.9	2073.9	107.2	9.424	8.026	1.100	55.2	32.5
617	951	7.589	35.146	2339.	2215.	* 2207	541.1	25.7	2091.2	98.1	8.029	*	25.4	2093.1	96.5	10.166	7.993	0.994	43.5	20.6
618	1003	7.059	35.123	2336.	2211.	* 2209	523.3	25.4	2007.2	90.3	8.030	*	25.1	2099.2	96.7	10.000	8.000	0.996	43.3	20.2
619	1052	6.609	35.115	2341.	2205.	* 2187	493.2	24.3	2002.5	102.2	8.062	*	23.9	2004.6	100.4	9.511	8.022	1.034	46.5	23.3
620	1103	6.300	35.121	2340.	2210.	*	493.7	24.6	2004.4	101.8	8.060	*	24.2	2006.6	99.2	9.596	8.018	1.021	44.0	21.4
621	1202	5.850	35.125	2340.	2190.	* 2202	405.6	20.5	2052.7	116.8	8.136	*	20.1	2055.3	114.5	8.117	8.091	1.179	59.3	35.6
622	1303	5.457	35.120	2349.	2202.	* 2196	420.9	22.0	2069.6	110.4	8.113	*	21.6	2072.3	108.1	8.640	8.064	1.113	51.9	20.0
623	1402	5.076	35.112	2341.	2195.	* 2181	433.6	22.5	2069.2	107.2	8.106	*	22.1	2072.2	104.7	8.859	8.053	1.079	47.7	23.4
301	1500	4.770	35.095	2336.	2197.	* 2189	433.0	22.9	2000.7	105.4	8.102	*	22.4	2071.0	102.0	9.027	8.044	1.057	44.0	20.2
303	1900	3.007	35.032	2341.	2153.	* 2191	397.0	21.5	2001.1	110.4	8.137	*	21.0	2003.2	106.9	8.630	8.063	1.097	45.0	19.2
305	2300	3.255	34.984	2342.	2199.	* 2197	401.2	22.3	2009.2	107.6	8.131	*	21.5	2074.1	103.4	9.059	8.041	1.060	37.4	10.4
306	2500	3.123	34.965	2341.	2205.	* 2205	420.3	23.9	2003.7	101.4	8.104	*	23.1	2000.9	97.0	9.054	8.006	0.995	20.9	1.2
307	2700	2.992	34.952	2345.	2205.	* 2190	404.0	22.7	2076.4	105.9	8.127	*	21.9	2002.1	101.0	9.527	8.021	1.035	30.7	2.4
308	2900	2.074	34.942	2342.	2200.	* 2103	410.2	23.6	2002.0	102.4	8.113	*	22.6	2000.0	97.3	10.017	7.999	0.997	24.0	-4.3
309	3100	2.706	34.935	2345.	2205.	* 2197	401.5	22.7	2076.4	105.9	8.129	*	21.7	2002.9	100.3	9.020	8.000	1.027	25.4	-4.3
310	3290	2.623	34.920	2346.	2205.	*	396.6	22.6	2075.9	106.5	8.133	*	21.5	2002.9	100.5	9.059	8.004	1.029	23.3	-7.0
311	3500	2.503	34.912	2344.	2206.	*	401.7	23.0	2070.3	104.7	8.120	*	21.9	2003.0	90.4	10.227	7.990	1.007	10.6	-12.6
312	3600	2.452	34.907	2347.	2205.	* 2197	391.5	22.4	2075.5	107.1	8.130	*	21.3	2003.2	100.5	10.075	7.997	1.020	19.4	-12.1
314	3700	2.407	34.901	2345.	2207.	* 2190	400.3	23.0	2079.3	104.7	8.129	*	21.0	2007.2	90.0	10.300	7.903	1.003	15.6	-16.2
315	3907	2.301	34.800	2349.	2215.	* 2204	410.9	23.7	2000.7	102.7	8.119	*	22.4	2006.9	95.7	10.032	7.963	0.979	10.6	-22.0
316	4107	2.224	34.800	2336.	2219.	* 2212	403.1	23.3	2091.3	104.4	8.120	*	22.0	2100.0	97.1	10.015	7.966	0.992	9.2	-24.2
317	4207	2.193	34.876	2334.	2203.	* 2201	366.0	21.2	2069.5	112.3	8.164	*	20.0	2070.7	104.3	10.026	7.999	1.007	15.1	-10.7
318	4307	2.171	34.873	2337.	2219.	*	400.3	23.2	2090.7	105.1	8.130	*	21.0	2099.9	97.3	10.947	7.961	0.995	6.7	-27.5
319	4507	2.137	34.869	2330.	2221.	* 2214	402.1	23.3	2093.2	104.5	8.129	*	21.9	2102.7	96.4	11.195	7.951	0.905	2.0	-32.1
320	4700	2.117	34.865	2304.	2221.	* 2209	307.5	22.5	2090.6	100.0	8.144	*	21.0	2100.7	99.3	10.997	7.959	1.015	2.7	-33.0
321	4907	2.111	34.864	2339.	2229.	* 2211	421.4	24.5	2103.9	100.7	8.110	*	22.9	2114.1	92.0	12.125	7.916	0.941	-7.6	-44.1
322	5107	2.114	34.860	2355.	2222.	*	412.3	23.9	2095.0	102.3	8.110	*	22.3	2106.5	93.2	12.123	7.916	0.953	-9.6	-46.9
323	5307	2.126	34.856	2361.	2223.	*	400.5	23.2	2094.6	105.2	8.131	*	21.6	2105.0	95.6	11.907	7.921	0.977	-10.4	-40.6
324	5510	2.136	34.860	2366.	2226.	* 2217	396.7	23.0	2096.6	106.4	8.135	*	21.3	2109.3	96.4	12.070	7.919	0.905	-13.1	-52.1
624	6012	2.100	34.856	2303.	2230.	* 2205	415.5	24.0	2103.5	102.5	8.117	*	22.2	2116.0	91.0	13.211	7.079	0.930	-26.6	-67.0

GEOSSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH

32	1	24	9	72	0834	23 58.5 N	53 59.5 W	5847
32	4	24	9	72	1451	23 51.8 N	54 1.3 W	5738
32	6	24	9	72	2156	23 51.8 N	53 59.7 W	
32	7	25	9	72	1659	23 52.8 N	54 2.4 W	

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH, T=INSITU								CALC PARAMETERS P, T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)
		TEMP. (C)	SAL. (0/00)	TALK (EQ/KG) (E-6)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AM (E-9)	PH	ICP (E-6)		
682	48	26.77	36.987	2427.	2848.	* 2927	* 342.6	9.2	1757.5	273.3	0.264	* 9.2	1757.6	273.2	5.467	0.262	2.955	228.2	287.9
684	135	21.19	36.998	2432.	2186.	*	* 337.7	11.1	1864.8	238.1	0.235	* 11.1	1865.1	229.8	5.879	0.231	2.492	184.8	163.5
688	488	16.34	36.288	2391.	2132.	* 2113	* 379.8	13.6	1934.8	183.6	0.197	* 13.5	1933.8	182.7	6.556	0.183	1.943	134.7	113.5
618	552	13.31	35.887	2364.	2143.	* 2149	* 393.9	15.5	1969.7	157.8	0.172	* 15.3	1971.8	156.6	7.837	0.153	1.644	187.3	85.6
612	788	10.83	35.482	2347.	2192.	*	* 511.3	21.8	2853.4	116.8	0.063	* 21.6	2854.9	115.6	9.171	0.038	1.282	64.9	42.8
614	774	9.576	35.326	2339.	2191.	* 2194	* 582.7	22.3	2856.5	112.1	0.064	* 22.1	2858.1	118.8	9.218	0.036	1.147	59.4	37.8
616	925	7.362	35.897	2335.	2221.	*	* 572.5	27.4	2181.8	92.5	0.085	* 27.1	2182.8	91.1	18.715	7.978	8.937	38.3	15.4
628	1381	5.197	35.849	2333.	2284.	* 2178	* 472.1	24.4	2879.6	99.9	0.072	* 24.8	2882.3	97.7	9.498	0.022	1.884	41.5	17.6
622	1458	4.629	35.854	2333.	2179.	*	* 391.4	28.7	2844.6	113.8	0.143	* 28.2	2847.8	111.8	8.285	0.086	1.148	53.8	28.4
482	2858	3.614	35.884	2348.	2192.	* 2197	* 392.3	21.5	2868.2	118.3	0.148	* 28.9	2864.6	106.5	8.696	0.061	1.893	43.2	17.8
484	2458	3.899	34.963	2341.	2285.	* 2281	* 416.2	23.3	2878.2	183.6	0.115	* 22.5	2883.3	99.2	9.553	0.028	1.817	31.7	4.2
486	2858	2.833	34.948	2347.	2288.	* 2286	* 485.4	22.9	2879.7	185.4	0.126	* 22.8	2885.8	188.3	9.672	0.014	1.827	28.3	-8.5
488	3158	2.653	34.922	2348.	2289.	* 2286	* 482.9	22.9	2888.7	185.4	0.128	* 21.9	2887.3	99.8	9.899	8.884	1.821	24.3	-5.6
418	3458	2.478	34.918	2349.	2286.	* 2196	* 389.5	22.3	2876.1	187.6	0.141	* 21.2	2883.5	181.3	9.877	8.885	1.837	22.2	-8.8
412	3858	2.336	34.988	2349.	2218.	*	* 398.1	22.9	2881.6	185.4	0.131	* 21.7	2889.8	98.5	18.466	7.988	1.888	14.2	-18.2
414	4858	2.298	34.996	2348.	2218.	* 2286	* 399.6	23.8	2882.1	184.8	0.138	* 21.8	2898.7	97.5	18.785	7.978	8.998	18.5	-22.6
416	4258	2.256	34.885	2347.	2193.	* 2193	* 359.3	28.7	2858.4	113.9	0.171	* 19.5	2867.7	185.8	9.898	8.884	1.881	15.9	-18.8
418	4458	2.179	34.378	2351.	2213.	*	* 398.1	23.8	2885.1	184.8	0.131	* 21.7	2894.5	96.8	11.862	7.956	8.398	4.1	-38.6
420	4858	2.887	34.854	2338.	2227.	*	* 417.6	24.3	2181.6	181.2	0.114	* 22.7	2111.7	92.6	11.969	7.922	8.946	-6.2	-42.5
422	5251	2.053	34.948	2359.	2221.	* 2218	* 398.8	23.1	2892.8	185.8	0.133	* 21.5	2184.8	95.5	11.876	7.925	8.976	-9.7	-47.7
424	5651	2.879	34.943	2365.	2228.	* 2217	* 482.9	23.4	2899.9	184.7	0.129	* 21.7	2111.9	94.5	12.425	7.986	8.965	-17.5	-57.2

GEOSCECS ATLANTIC STATION CAST DATE TIME E LONGITUDE 90T DEPTH
 33 1 26 9 72 1833 2 0.0 N 54 0.0 W 5241
 33 3 26 9 72 1715 28 33.8 N 54 2.8 W 5898
 33 7 27 9 72 8653 21 0.7 N 54 4.0 W

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P,T=INSITU					DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)
				TALK (EQ/KG) (E-6)	TIT TC02 (E-6)	GC TC02 (E-6)	PC02 (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AM	PH	ICP (E-6)		
783	69	24.982	37.294	2467.	2086.	* 2068	* 341.1	9.6	1887.2	269.2	0.265	* 9.6	1887.4	269.1	5.464	0.263	2.941	223.9	283.7
784	95	23.238	37.313	2456.	2113.	* 2065	* 372.3	10.9	1859.2	242.9	0.228	* 10.9	1859.5	242.6	5.953	0.225	2.654	197.3	176.9
785	157	21.087	37.081	2453.	2105.	*	* 329.5	10.3	1849.6	245.1	0.266	* 10.2	1838.8	244.7	5.488	0.261	2.668	198.8	178.3
786	216	18.628	36.659	2415.	2139.	* 2125	* 396.4	13.2	1929.7	196.1	0.198	* 13.2	1938.2	195.6	6.568	0.183	2.182	149.1	128.3
787	296	16.862	36.368	2399.	2158.	* 2128	* 412.8	14.5	1957.8	177.7	0.178	* 14.4	1958.5	177.1	6.922	0.168	1.888	129.9	188.9
788	394	15.181	36.849	2379.	2155.	* 2133	* 423.7	15.8	1978.3	168.9	0.158	* 15.7	1979.3	168.8	7.381	0.137	1.631	112.8	98.7
789	495	13.313	35.786	2371.	2188.	* 2147	* 467.9	18.4	2022.8	139.7	0.189	* 18.2	2023.8	138.7	8.185	0.091	1.455	39.8	68.2
718	592	11.647	35.563	2364.	2192.	* 2188	* 482.6	20.8	2044.5	127.5	0.891	* 19.8	2045.8	126.4	8.521	0.878	1.317	76.6	54.7
711	698	9.871	35.387	2353.	2218.	* 2282	* 554.1	24.5	2088.3	105.2	0.829	* 24.3	2089.6	104.8	9.914	0.884	1.877	53.3	31.1
712	798	8.861	35.128	2342.	2223.	*	* 571.7	26.8	2188.6	95.6	0.818	* 26.5	2182.2	94.3	10.477	0.988	0.972	42.7	28.2
714	839	7.488	35.858	2348.	2246.	* 2224	* 629.8	30.1	2129.3	86.6	0.798	* 29.8	2138.9	85.3	11.524	0.938	0.877	33.2	18.5
715	898	6.858	35.814	2344.	2237.	* 2228	* 591.8	28.9	2119.2	99.9	0.792	* 28.6	2128.9	87.6	11.828	0.958	0.899	35.8	12.1
716	941	6.478	34.985	2346.	2237.	* 2231	* 574.9	28.4	2118.6	89.9	0.882	* 28.1	2128.4	88.5	10.818	0.966	0.987	35.4	12.5
717	989	5.988	34.942	2341.	2239.	*	* 589.7	29.7	2123.4	85.9	0.798	* 29.3	2125.3	84.4	11.184	0.951	0.965	31.8	7.8
718	1041	5.729	34.936	2343.	2222.	* 2224	* 511.1	26.8	2188.8	96.8	0.845	* 25.6	2182.1	94.3	9.874	0.886	0.966	48.4	17.1
720	1196	5.156	34.998	2344.	2229.	*	* 522.5	27.1	2189.2	92.7	0.834	* 26.7	2111.6	98.8	10.273	0.988	0.931	35.5	11.8
721	1295	4.955	35.882	2349.	2215.	* 2288	* 456.5	23.8	2088.1	183.1	0.888	* 23.4	2098.8	188.8	9.167	0.838	1.833	44.7	28.7
722	1394	4.688	35.816	2339.	2288.	*	* 434.8	22.9	2071.6	185.5	0.185	* 22.4	2074.5	183.8	8.893	0.851	1.858	46.8	21.7
723	1494	4.445	35.814	2342.	2282.	*	* 427.8	22.8	2073.2	186.1	0.118	* 22.3	2076.3	183.4	8.867	0.852	1.861	45.4	28.8
381	1498	4.478	35.814	2346.	2197.	* 2199	* 485.1	21.5	2064.2	111.3	0.132	* 21.1	2067.4	188.5	8.429	0.874	1.114	58.5	25.9
382	1598	4.281	35.812	2342.	2281.	* 2185	* 422.3	22.6	2071.8	186.6	0.114	* 22.1	2075.2	183.7	8.861	0.853	1.863	44.8	19.9
383	1799	3.979	35.819	2333.	2198.	* 2197	* 383.8	28.8	2062.6	114.7	0.152	* 28.2	2066.5	111.3	8.264	0.883	1.143	58.5	25.8
384	1998	3.672	34.998	2331.	2213.	* 2191	* 423.8	23.1	2084.8	185.8	0.113	* 22.5	2089.8	181.5	9.219	0.835	1.841	38.6	12.6
385	2197	3.396	34.984	2349.	2192.	* 2197	* 369.1	28.4	2056.8	115.6	0.165	* 19.8	2068.8	111.4	8.325	0.888	1.143	46.6	19.9
386	2395	3.139	34.965	2331.	2287.	* 2194	* 398.8	22.2	2076.5	188.3	0.135	* 21.5	2081.6	183.9	9.887	0.842	1.865	37.8	9.6
387	2595	2.961	34.951	2356.	2211.	*	* 393.9	22.1	2079.9	189.8	0.139	* 21.3	2085.5	184.2	9.164	0.838	1.868	35.1	7.1
388	2793	2.843	34.948	2357.	2284.	* 2281	* 372.8	21.8	2069.4	113.6	0.168	* 28.2	2075.5	188.3	8.881	0.852	1.189	37.8	8.3
389	2991	2.742	34.933	2364.	2211.	*	* 372.9	21.1	2076.2	113.7	0.161	* 28.2	2082.7	188.1	9.827	0.844	1.186	34.5	5.2
318	3891	2.692	34.927	2355.	2284.	* 2218	* 374.4	21.3	2078.5	112.3	0.158	* 28.3	2077.2	186.5	9.179	0.837	1.898	31.7	2.1
311	3189	2.649	34.924	2356.	2286.	*	* 376.9	21.4	2072.7	111.8	0.155	* 28.5	2079.7	185.9	9.318	0.831	1.884	29.9	-8.1
312	3289	2.685	34.923	2354.	2216.	* 2281	* 486.4	23.1	2087.9	185.8	0.125	* 22.1	2094.8	99.1	10.882	0.996	1.815	22.8	-8.4
314	3397	2.563	34.915	2331.	2281.	* 2289	* 374.1	21.3	2068.8	111.7	0.157	* 28.3	2075.4	185.3	9.459	0.824	1.878	26.9	-3.9
315	3593	2.469	34.911	2359.	2217.	* 2282	* 484.6	23.2	2088.8	185.1	0.127	* 22.8	2094.4	98.6	10.335	0.986	1.889	17.6	-13.8
316	3791	2.373	34.982	2365.	2224.	* 2197	* 397.4	22.8	2094.3	186.9	0.135	* 21.6	2182.4	188.8	10.319	0.986	1.823	16.5	-15.7
317	3991	2.382	34.895	2355.	2284.	* 2285	* 368.9	21.2	2078.4	112.3	0.162	* 28.1	2079.1	184.8	9.863	0.886	1.872	18.6	-14.3
318	4898	2.275	34.892	2361.	2212.	* 2283	* 374.9	21.6	2079.8	111.4	0.157	* 28.4	2087.9	183.7	10.881	0.996	1.861	16.1	-17.2
319	4188	2.246	34.898	2368.	2218.	*	* 391.9	22.6	2088.8	187.4	0.139	* 21.3	2096.9	99.8	10.681	0.975	1.828	18.8	-22.9
320	4287	2.284	34.882	2359.	2221.	* 2283	* 481.1	23.2	2092.7	185.1	0.138	* 21.8	2181.8	97.4	10.936	0.961	0.996	7.8	-27.1
321	4388	2.172	34.878	2362.	2219.	*	* 388.3	22.5	2088.6	188.8	0.143	* 21.1	2098.8	99.9	10.782	0.971	1.821	8.1	-26.4
322	4587	2.094	34.867	2365.	2236.	* 2286	* 429.5	24.7	2111.1	188.2	0.187	* 23.2	2128.6	92.2	11.852	0.926	0.942	-2.6	-37.8
323	4787	1.994	34.847	2366.	2239.	* 2223	* 438.8	25.1	2114.7	99.2	0.183	* 23.5	2124.7	98.9	12.288	0.914	0.928	-7.8	-43.1
324	4987	1.981	34.846	2367.	2238.	* 2225	* 482.3	23.5	2118.8	184.8	0.129	* 21.9	2112.3	95.8	11.679	0.933	0.878	-5.2	-42.1

GEOSOLS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 34 5 28 9 72 2131 18 1.8 N 53 59.8 W 4724
 34 9 29 9 72 0305 18 2.8 N 53 58.8 W 4731
 34 18 29 9 72 0818 18 2.8 N 53 57.8 W
 34 12 29 9 72 1481 18 2.8 N 53 57.8 W

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS				CALC PARAMETERS P=1ATM.T=INSITU*								CALC PARAMETERS P.T=INSITU				DELTA	DELTA			
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8.000)	TALK (EQ-KG) (E-6)	TC02 (M/KG) (E-6)	GC (M/KG) (E-6)	TC02 (M/KG) (E-6)	PC02 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AH (E-9)	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG) (E-6)	DELTA CO3= (ARAG) (M/KG) (E-6)
1881	5	27.552	34.884	2313.	1941.	* 1949	* 319.4	8.5	1669.7	262.8	8.282	* 8.5	1669.7	262.8	5.229	8.282	2.687	217.6	197.3	
1882	46	26.928	38.659	2428.	2861.	*	* 383.7	18.3	1795.8	254.9	8.225	* 18.3	1795.9	254.8	5.974	8.224	2.738	289.7	189.4	
1883	73	25.441	37.837	2441.	2846.	*	* 318.6	8.9	1759.9	278.3	8.287	* 8.8	1759.1	278.1	5.197	8.284	3.019	232.8	212.6	
1884	98	23.765	37.878	2439.	2892.	* 2859	* 368.5	18.6	1835.7	245.7	8.234	* 18.6	1836.8	245.4	5.881	8.231	2.687	288.8	179.6	
1885	149	22.854	37.897	2442.	2897.	*	* 344.7	18.4	1843.3	243.3	8.251	* 18.4	1843.7	242.9	5.678	8.246	2.642	197.1	176.6	
1888	198	19.824	36.831	2421.	2115.	*	* 365.1	11.8	1887.1	216.1	8.223	* 11.7	1887.6	215.7	6.868	8.217	2.329	169.4	148.8	
1887	241	17.821	38.526	2481.	2185.	* 2186	* 342.8	11.7	1885.1	288.2	8.239	* 11.7	1885.7	287.6	5.888	8.231	2.223	168.9	148.8	
1888	318	16.721	38.338	2386.	2131.	* 2118	* 393.2	13.9	1936.8	181.1	8.185	* 13.8	1936.8	188.4	6.784	8.174	1.922	133.8	112.8	
1889	391	14.881	38.828	2374.	2128.	* 2144	* 373.7	14.8	1939.7	174.3	8.197	* 13.9	1940.7	173.4	6.534	8.184	1.832	125.4	184.1	
1818	491	12.532	39.642	2352.	2184.	* 2174	* 518.2	28.8	2838.2	125.2	8.871	* 28.4	2839.3	124.3	8.854	8.853	1.299	75.3	53.7	
1811	591	18.781	33.48	2347.	2288.	*	* 561.6	24.8	2876.4	187.6	8.827	* 23.8	2877.6	186.6	9.885	8.885	1.186	56.7	34.8	
1812	639	9.719	33.248	2338.	2223.	* 2229	* 628.4	27.8	2181.3	93.9	7.978	* 27.8	2182.5	92.9	11.119	7.954	8.968	42.6	28.5	
1815	747	7.391	34.941	2328.	2221.	*	* 597.6	28.6	2185.6	88.8	7.988	* 28.4	2185.8	87.6	18.986	7.989	8.897	36.2	13.7	
1818	798	6.812	34.841	2323.	2237.	* 2238	* 672.3	33.1	2126.1	77.8	7.937	* 32.8	2127.6	76.6	12.415	7.986	8.782	24.7	2.1	
1817	849	6.232	34.889	2327.	2223.	* 2237	* 588.9	29.8	2187.1	88.9	7.994	* 28.7	2188.7	85.6	18.928	7.962	8.873	33.2	18.5	
1818	899	5.964	34.819	2324.	2238.	*	* 645.5	32.5	2124.9	78.6	7.951	* 32.2	2126.5	77.3	12.137	7.916	8.789	24.5	1.6	
1819	958	5.789	34.825	2336.	2237.	*	* 592.9	38.2	2122.6	84.3	7.986	* 29.8	2124.4	82.8	11.245	7.949	8.846	29.6	6.6	
1820	999	5.627	34.863	2338.	2224.	* 2224	* 568.4	28.6	2187.7	87.7	8.887	* 28.2	2189.6	86.2	18.762	7.968	8.881	32.6	9.4	
1821	1098	5.389	34.874	2348.	2227.	* 2288	* 531.5	27.3	2188.1	91.6	8.828	* 26.9	2118.2	89.8	18.328	7.986	8.918	33.4	11.9	
1822	1197	5.237	34.982	2338.	2211.	* 2198	* 584.9	26.1	2898.4	94.5	8.846	* 25.7	2892.8	92.5	18.887	8.888	8.949	37.3	13.5	
1823	1345	4.886	35.811	2332.	2283.	* 2288	* 484.2	24.4	2878.8	99.8	8.878	* 23.9	2881.6	97.5	9.426	8.826	1.881	48.9	16.8	
881	1492	4.468	35.813	2329.	2189.	* 2197	* 424.8	22.6	2888.7	185.8	8.111	* 22.1	2883.8	183.1	8.858	8.853	1.858	45.1	28.6	
1824	1494	4.475	35.813	2334.	2191.	*	* 417.7	22.2	2881.3	187.5	8.118	* 21.7	2884.4	184.9	8.783	8.868	1.876	46.9	22.3	
882	1641	4.118	35.882	2331.	2188.	* 2199	* 418.9	22.1	2858.5	187.4	8.122	* 21.6	2861.9	184.5	8.729	8.858	1.872	45.1	28.1	
883	1791	3.847	34.958	2336.	2191.	* 2188	* 482.5	21.9	2888.6	188.6	8.138	* 21.3	2884.4	185.3	8.687	8.861	1.888	44.5	19.8	
884	1941	3.658	34.994	2336.	2187.	* 2289	* 389.8	21.3	2855.8	118.8	8.143	* 28.7	2859.1	187.2	8.534	8.868	1.899	44.9	19.8	
885	2089	3.458	34.983	2341.	2195.	*	* 395.7	21.8	2863.9	189.3	8.136	* 21.2	2868.3	185.5	8.883	8.855	1.882	41.7	15.3	
886	2248	3.211	34.968	2338.	2194.	* 2187	* 395.5	22.8	2864.8	188.8	8.135	* 21.3	2868.8	183.9	8.951	8.848	1.865	38.5	11.7	
887	2398	3.873	34.958	2336.	2198.	*	* 489.1	22.9	2878.5	184.8	8.121	* 22.1	2875.5	188.3	9.376	8.828	1.828	33.4	6.1	
888	2548	2.958	34.947	2341.	2282.	*	* 485.6	22.8	2874.8	185.2	8.125	* 22.8	2879.3	188.7	9.428	8.826	1.831	32.2	4.3	
889	2889	2.854	34.945	2341.	2282.	* 2188	* 484.1	22.8	2874.8	185.2	8.126	* 21.9	2879.7	188.4	9.526	8.821	1.828	38.2	1.9	
818	2943	2.788	34.939	2342.	2284.	*	* 485.8	23.8	2876.4	184.7	8.124	* 22.1	2882.4	189.6	9.781	8.813	1.828	27.7	-1.1	
811	2995	2.713	34.932	2356.	2285.	* 2212	* 375.7	21.3	2871.3	112.4	8.157	* 28.4	2877.8	186.8	9.123	8.848	1.894	33.2	3.9	
812	3142	2.634	34.929	2348.	2283.	*	* 391.3	22.3	2873.2	187.5	8.139	* 21.3	2879.9	181.8	9.639	8.816	1.842	25.4	-3.4	
814	3292	2.558	34.919	2345.	2283.	* 2216	* 392.3	22.4	2873.7	187.8	8.137	* 21.4	2888.7	181.8	9.887	8.888	1.834	23.8	-6.6	
815	3448	2.486	34.911	2347.	2285.	* 2216	* 482.3	23.8	2881.1	184.8	8.127	* 21.9	2888.4	188.6	18.177	7.992	1.818	19.6	-11.3	
816	3585	2.422	34.988	2348.	2288.	* 2189	* 391.1	22.4	2876.5	187.8	8.139	* 21.3	2884.2	188.5	18.848	7.998	1.828	19.6	-11.9	
817	3739	2.337	34.988	2352.	2212.	* 2224	* 396.8	22.8	2883.2	186.8	8.134	* 21.6	2891.1	199.2	18.297	7.987	1.815	16.4	-15.6	
818	3894	2.269	34.893	2354.	2212.	* 2214	* 398.3	22.5	2882.3	187.2	8.148	* 21.3	2898.6	188.1	18.383	7.987	1.824	15.1	-17.4	
819	4043	2.219	34.885	2352.	2218.	* 2287	* 418.3	23.7	2891.6	182.7	8.128	* 22.4	2188.1	195.5	18.949	7.961	8.977	8.5	-24.6	
820	4191	2.159	34.879	2354.	2218.	* 2238	* 396.7	23.8	2886.4	185.6	8.133	* 21.7	2895.4	198.0	18.759	7.968	1.882	8.9	-24.8	
821	4346	2.115	34.874	2352.	2228.	* 2212	* 413.9	24.8	2894.4	181.8	8.116	* 22.6	2183.5	193.9	11.368	7.945	8.968	2.6	-31.7	
822	4495	2.878	34.866	2357.	2221.	* 2289	* 484.1	23.5	2893.5	184.8	8.126	* 22.1	2183.8	193.9	11.247	7.949	8.988	2.5	-32.4	
823	4685	2.838	34.857	2359.	2225.	* 2234	* 411.8	24.9	2899.7	182.3	8.119	* 22.5	2189.5	194.8	11.648	7.934	8.968	-2.3	-38.8	
824	4885	2.834	34.881	2357.	2228.	*	* 488.4	23.3	2892.2	184.5	8.138	* 21.8	2182.1	196.8	11.354	7.945	8.982	-8.2	-35.9	

GEOSECS ATLANTIC STATION CAST DR LATITUDE LONGITUDE BOT DEPTH
 36 1 11 18 4 15 0.0 N 53 56.5 W 5449
 36 4 11 18 72 016 15 1.4 N 53 58.0 W 5448
 36 7 12 18 72 1883 14 59.3 N 53 57.0 W 5448

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM.T=INSITU*							CALC PARAMETERS P,T=INSITU				DELTA CO3- (M/KG) (E-6)	DELTA CO3- (ARAG) (M/KG) (E-6)	
			SAL. (8/88) (M/KG)	TALK (M/KG) (E-6)	TIT TCO2 (M/KG) (E-6)	GC TCO2 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3- (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3- (M/KG) (E-6)	AM (E-9)	PH			ICP (E-6)
481	4	27.82	35.367	2341.	1964.	* 1978	* 329.4	0.7	1698.8	266.5	8.274	* 8.7	1698.8	266.5	5.324	8.274	2.763	221.4	281.1
482	22	27.79	35.408	2343.	1966.	* 1982	* 338.0	0.7	1698.8	266.5	8.273	* 8.7	1698.8	266.4	5.339	8.273	2.766	221.2	280.9
483	82	25.18	37.837	2437.	2838.	* 2881	* 387.6	0.6	1748.9	288.5	8.297	* 8.6	1749.1	288.3	5.875	8.295	3.843	235.8	214.7
485	219	17.47	36.485	2393.	2155.	* 2149	* 446.9	15.4	1969.7	178.9	8.140	* 15.4	1969.2	178.4	7.365	8.133	1.823	123.7	182.9
486	287	15.15	35.985	2378.	2167.	*	* 474.5	17.6	2001.7	147.7	8.189	* 17.5	2002.3	147.2	7.965	8.099	1.533	99.8	78.7
487	359	12.73	35.545	2348.	2172.	* 2281	* 487.8	19.5	2022.4	138.8	8.088	* 19.4	2023.2	129.4	8.418	8.075	1.348	81.3	59.9
488	429	11.69	35.459	2347.	2191.	* 2213	* 526.8	21.8	2051.4	117.8	8.056	* 21.7	2052.3	117.8	9.128	8.048	1.216	68.4	46.9
489	497	10.23	35.257	2337.	2213.	* 2259	* 603.2	26.2	2087.8	99.8	7.996	* 26.1	2088.7	98.2	10.536	7.977	1.015	48.9	27.2
418	567	8.65	35.838	2338.	2219.	*	* 612.9	28.1	2099.6	91.3	7.983	* 27.9	2100.7	98.4	10.938	7.961	0.929	48.5	18.5
411	637	7.34	34.876	2324.	2226.	* 2251	* 633.6	38.4	2111.6	84.8	7.964	* 38.2	2112.8	83.8	11.497	7.939	0.849	32.4	18.2
412	788	6.668	34.783	2323.	2235.	* 2272	* 662.4	32.6	2123.7	78.7	7.943	* 32.3	2125.8	77.7	12.135	7.916	0.792	26.5	4.1
415	777	6.881	34.728	2316.	2227.	* 2259	* 636.7	32.1	2116.1	78.9	7.955	* 31.8	2117.5	77.7	11.877	7.925	0.791	25.9	3.3
417	915	5.539	34.738	2321.	2248.	* 2232	* 666.8	34.1	2138.9	75.8	7.936	* 33.8	2132.5	73.7	12.598	7.988	0.758	28.7	-2.2
418	1886	5.318	34.775	2325.	2231.	* 2246	* 681.4	31.8	2118.5	81.5	7.977	* 38.7	2128.4	88.8	11.548	7.937	0.815	26.3	3.8
419	1188	5.285	34.857	2324.	2224.	* 2243	* 573.7	29.7	2189.9	84.4	7.995	* 29.3	2112.8	82.7	11.179	7.952	0.845	28.2	4.7
428	1284	5.131	34.915	2329.	2216.	*	* 523.6	27.2	2097.5	91.3	8.031	* 26.7	2099.9	89.4	10.361	7.985	0.915	34.8	18.3
421	1383	4.973	34.972	2327.	2287.	* 2228	* 494.6	25.8	2086.4	94.8	8.053	* 25.4	2089.8	92.7	9.958	8.002	0.958	36.4	12.4
422	1485	4.747	34.985	2331.	2288.	* 2238	* 456.8	24.8	2075.2	100.9	8.084	* 23.5	2078.8	98.4	9.332	8.038	1.018	41.3	17.8
423	1582	4.434	34.958	2327.	2193.	* 2235	* 448.5	23.4	2067.2	102.4	8.096	* 23.8	2078.3	99.8	9.168	8.038	1.023	41.7	17.1
424	1683	4.172	34.996	2328.	2174.	* 2212	* 382.6	28.6	2039.9	113.6	8.158	* 28.1	2043.3	118.6	8.163	8.088	1.134	51.6	26.7
781	1795	3.698	34.983	2324.	2179.	* 2166	* 397.8	21.7	2049.8	108.3	8.133	* 21.2	2052.8	105.8	8.638	8.064	1.077	44.1	18.7
785	2286	3.25	34.959	2331.	2181.	* 2287	* 379.2	21.1	2048.7	111.2	8.151	* 20.4	2053.5	107.1	8.611	8.065	1.098	42.1	15.4
718	2526	2.932	34.942	2331.	2189.	* 2225	* 391.9	22.8	2058.8	107.2	8.137	* 21.2	2064.3	102.5	9.217	8.035	1.058	33.4	5.4
715	3882	2.735	34.929	2343.	2183.	* 2197	* 351.2	19.9	2046.9	117.1	8.180	* 19.8	2052.6	111.3	8.634	8.064	1.148	37.6	9.3
719	3582	2.518	34.913	2339.	2194.	* 2252	* 582.9	21.9	2063.6	108.6	8.146	* 28.8	2071.1	102.1	9.987	8.088	1.045	22.4	-8.8
724	4801	2.32	34.893	2342.	2197.	* 2232	* 388.5	21.9	2066.5	108.6	8.148	* 20.7	2075.1	101.2	10.218	7.991	1.035	14.9	-18.1

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 37 1 13 18 72 1140 12 1.9 N 50 59.8 W 5873
 37 3 13 18 72 1926 11 59.5 N 51 0.5 W 5839
 37 6 14 18 72 8786 12 1.2 N 51 2.8 W 5858

GC TCOZ VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS						*CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8.008)	TALK (E-KG) (E-6)	TIT TCOZ (E-6)	* GC TCOZ (E-6)	* PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	* H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH (E-9)	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG) (E-6)	DELTA CO3= (ARAG) (M/KG) (E-6)
881	15	27.833	35.953	2376.	1992.	*	* 335.7	8.8	1711.8	271.4	8.270	* 8.8	1711.8	271.3	5.375	8.270	2.868	226.3	206.8
682	39	26.254	36.456	2484.	2028.	*	* 348.1	9.3	1753.8	265.7	8.263	* 9.3	1753.1	265.6	5.469	8.262	2.839	228.5	208.2
683	59	25.491	36.458	2487.	2031.	*	* 338.4	9.2	1756.4	265.4	8.272	* 9.2	1756.5	265.3	5.378	8.270	2.833	228.8	199.6
684	115	21.187	36.751	2428.	2113.	*	* 382.4	11.9	1883.5	217.6	8.211	* 11.9	1883.8	217.3	6.212	8.207	2.341	171.6	151.1
685	177	14.811	35.928	2378.	2188.	*	* 526.5	19.7	2833.3	134.9	8.869	* 19.7	2833.7	134.6	8.662	8.862	1.417	87.9	67.1
686	227	12.482	35.479	2358.	2198.	*	* 557.4	22.6	2859.5	116.8	8.836	* 22.5	2859.9	115.6	9.375	8.828	1.282	68.3	47.3
687	278	10.576	35.232	2348.	2206.	*	* 573.2	24.6	2876.8	184.8	8.818	* 24.6	2877.1	184.3	9.838	8.887	1.877	55.6	35.4
688	352	9.838	35.189	2334.	2196.	*	* 537.2	23.7	2865.7	186.6	8.848	* 23.6	2866.5	186.8	9.487	8.827	1.891	57.7	36.2
689	453	8.461	34.988	2329.	2218.	*	* 622.1	28.8	2188.2	89.1	7.976	* 28.6	2181.8	88.4	11.882	7.959	0.984	39.3	17.5
618	552	7.267	34.743	2321.	2238.	*	* 662.4	31.9	2117.7	88.4	7.946	* 31.7	2118.7	79.6	11.981	7.924	0.811	29.6	7.7
611	651	6.498	34.678	2324.	2237.	*	* 661.5	32.8	2126.8	78.2	7.944	* 32.5	2127.2	77.3	12.862	7.919	0.786	26.5	4.2
612	751	6.068	34.688	2323.	2233.	*	* 635.8	32.8	2121.4	79.6	7.958	* 31.7	2122.8	78.5	11.789	7.929	0.798	25.9	4.4
615	849	5.391	34.643	2325.	2243.	*	* 657.8	33.9	2133.6	75.5	7.942	* 33.5	2135.1	74.3	12.348	7.968	0.755	21.9	-8.9
616	949	5.086	34.666	2327.	2233.	*	* 595.1	31.8	2128.5	81.5	7.981	* 38.6	2122.3	88.1	11.385	7.944	0.814	25.8	3.7
617	1074	5.155	34.821	2333.	2231.	*	* 566.6	29.4	2116.8	85.6	8.081	* 29.8	2118.8	84.8	10.982	7.959	0.857	29.7	6.3
618	1199	5.083	34.983	2338.	2288.	*	* 465.5	24.3	2083.8	188.7	8.879	* 23.9	2085.5	98.6	9.282	8.832	1.889	43.3	19.6
619	1299	4.876	34.959	2337.	2289.	*	* 469.2	24.6	2085.8	99.4	8.875	* 24.1	2087.7	97.2	9.448	8.825	0.996	41.8	17.8
620	1488	4.587	34.978	2335.	2198.	*	* 413.7	21.9	2059.4	188.7	8.122	* 21.5	2062.4	186.2	8.541	8.868	1.889	49.1	24.8
621	1498	4.392	34.992	2338.	2188.	*	* 398.7	21.2	2055.1	111.6	8.136	* 20.8	2058.3	108.9	8.342	8.879	1.117	58.8	26.3
622	1599	4.154	34.989	2334.	2181.	*	* 386.3	20.8	2047.1	113.2	8.147	* 20.3	2050.5	118.2	8.213	8.885	1.138	51.2	26.3
623	1699	3.817	34.986	2335.	2177.	*	* 369.6	20.1	2048.9	116.8	8.163	* 19.6	2044.6	112.8	7.987	8.898	1.157	52.8	27.6
381	1791	3.747	34.981	2336.	2177.	*	* 366.3	20.8	2048.5	115.5	8.167	* 19.5	2044.4	113.1	7.989	8.898	1.168	52.3	26.8
624	1848	3.782	34.978	2332.	2173.	*	* 364.6	19.9	2038.6	116.4	8.168	* 19.4	2048.7	112.9	8.812	8.896	1.158	51.5	25.9
382	1948	3.529	34.969	2335.	2175.	*	* 368.9	19.9	2038.8	117.1	8.171	* 19.3	2042.3	113.4	8.818	8.896	1.163	51.1	25.2
383	2091	3.332	34.983	2338.	2182.	*	* 367.5	20.4	2046.9	114.8	8.164	* 19.8	2051.5	118.8	8.254	8.883	1.136	47.8	28.6
384	2241	3.198	34.956	2336.	2177.	*	* 358.5	20.8	2048.5	116.5	8.173	* 19.3	2045.4	112.2	8.282	8.886	1.158	46.9	28.8
385	2391	3.885	34.949	2339.	2184.	*	* 366.6	20.5	2049.3	114.2	8.164	* 19.8	2054.5	109.7	8.478	8.872	1.124	42.8	15.4
386	2539	2.984	34.942	2348.	2188.	*	* 353.7	19.9	2043.1	117.1	8.178	* 19.1	2048.7	112.2	8.324	8.888	1.149	43.7	15.8
387	2691	2.884	34.937	2344.	2187.	*	* 368.4	20.3	2051.2	115.5	8.171	* 19.5	2057.1	118.3	8.577	8.867	1.138	48.2	11.8
388	2848	2.787	34.928	2349.	2193.	*	* 362.5	20.5	2057.5	115.8	8.178	* 19.7	2063.7	109.6	8.727	8.859	1.122	37.7	8.9
389	3848	2.682	34.921	2349.	2281.	*	* 388.3	21.6	2068.9	118.5	8.151	* 20.7	2075.5	104.9	9.292	8.832	1.873	38.7	1.2
318	3239	2.999	34.915	2353.	2288.	*	* 368.2	21.8	2065.6	113.5	8.163	* 20.8	2072.6	187.3	9.188	8.837	1.899	38.8	8.6
311	3441	2.517	34.988	2353.	2281.	*	* 388.8	21.1	2067.1	112.8	8.163	* 20.1	2074.6	186.3	9.378	8.828	1.888	27.3	-3.6
312	3441	2.517	34.988	2353.	2196.	*	* 357.2	20.4	2059.9	115.6	8.175	* 19.4	2067.6	189.8	9.182	8.841	1.116	38.8	-8.9
315	3681	2.452	34.988	2348.	2198.	*	* 371.6	21.3	2063.2	111.5	8.159	* 20.2	2073.8	184.8	9.598	8.818	1.872	23.8	-7.7
317	3876	2.351	34.895	2347.	2282.	*	* 382.2	22.8	2071.3	188.7	8.147	* 20.8	2079.6	101.6	10.112	7.995	1.839	16.9	-15.6
318	4091	2.294	34.891	2348.	2193.	*	* 357.8	20.6	2057.9	114.5	8.173	* 19.4	2066.8	186.7	9.678	8.814	1.891	19.7	-13.5
319	4288	2.272	34.889	2358.	2195.	*	* 357.9	20.6	2059.9	114.5	8.173	* 19.4	2069.1	186.5	9.885	8.889	1.889	17.4	-16.4
320	4378	2.244	34.884	2351.	2199.	*	* 364.4	21.8	2065.2	112.7	8.166	* 19.8	2074.8	184.5	10.128	7.995	1.868	12.9	-21.4
322	4731	1.864	34.841	2363.	2225.	*	* 396.6	23.2	2096.6	185.2	8.134	* 21.7	2106.7	96.6	11.316	7.946	8.986	-8.8	-36.8
323	4988	1.688	34.818	2378.	2234.	*	* 408.5	23.6	2106.1	184.2	8.131	* 22.1	2116.5	95.4	11.565	7.937	8.973	-4.5	-41.1
324	5818	1.647	34.885	2373.	2236.	*	* 398.3	23.5	2107.6	184.9	8.133	* 21.9	2118.2	95.8	11.622	7.935	8.978	-6.8	-43.1

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 39 1 17 18 72 0212 7 57.5 N 43 51.3 W 4793
 39 3 17 18 72 0832 7 57.5 N 43 51.8 W 4797
 39 5 17 18 72 1739 7 55.2 N 43 58.5 W 4777

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS						CALC PARAMETERS P=1ATM.T=INSITU						CALC PARAMETERS P,T=INSITU						DELTA	DELTA	
SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/100)	TALK (EQ/KG)	TIT (M/KG)	GC (M/KG)	TCO2 (E-6)	PCO2 (E-6)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3- (E-6)	PH	PH	CP (E-6)	CO3= (CALC) (M/KG)	CO3= (ARAG) (M/KG)
501	1	28.656	35.482	2341.	1961.	* 1960	* 336.9	8.7	1683.8	268.4	8.268	* 8.7	1683.8	268.4	5.396	8.268	2.792	223.4	203.1	
502	33	27.688	35.833	2365.	1959.	* 1992	* 299.2	7.9	1685.2	285.8	8.307	* 7.9	1665.3	285.0	4.939	8.306	3.082	240.5	228.2	
503	63	28.798	36.282	2389.	2184.	* 2186	* 482.8	12.7	1889.2	283.1	8.180	* 12.7	1888.4	283.8	6.512	8.186	2.154	157.3	136.9	
504	124	13.236	35.391	2345.	2183.	* 2284	* 539.1	21.3	2039.6	122.1	8.832	* 21.2	2039.9	121.9	8.978	8.847	1.264	75.4	54.5	
505	203	18.814	34.968	2325.	2194.	* 2289	* 562.1	24.7	2066.7	102.6	8.822	* 24.6	2067.1	102.3	9.683	8.814	1.849	55.8	33.9	
506	306	9.888	34.854	2322.	2284.	* 2227	* 588.5	26.6	2082.2	95.1	8.888	* 26.5	2082.8	94.6	18.274	7.988	8.967	46.6	25.2	
507	388	8.246	34.764	2318.	2215.	* 2224	* 629.9	29.4	2098.9	86.8	7.969	* 29.2	2099.6	86.2	11.186	7.954	8.978	37.5	15.9	
508	477	7.613	34.787	2315.	2281.	* *	* 565.5	26.9	2081.8	92.3	8.889	* 26.8	2082.7	91.5	18.213	7.991	8.931	42.2	28.3	
509	512	7.748	34.771	2318.	2236.	* 2256	* 721.3	34.2	2125.8	76.8	7.913	* 34.8	2126.7	75.3	12.787	7.893	8.768	25.7	3.8	
510	574	7.197	34.733	2319.	2239.	* 2253	* 715.9	34.6	2129.6	74.8	7.914	* 34.4	2136.6	74.1	12.829	7.892	8.754	23.9	1.9	
511	657	6.489	34.678	2319.	2241.	* 2236	* 783.8	35.8	2132.4	73.7	7.918	* 34.7	2133.5	72.8	12.821	7.892	8.748	21.9	-8.4	
512	758	5.738	34.641	2322.	2238.	* 2246	* 655.8	33.3	2128.2	76.3	7.944	* 33.8	2129.6	75.4	12.178	7.915	8.766	23.7	1.1	
515	858	5.482	34.651	2321.	2236.	* 2263	* 643.9	33.1	2126.8	76.9	7.958	* 32.7	2127.6	75.7	12.124	7.916	8.769	23.2	8.3	
516	961	5.184	34.677	2326.	2236.	* 2244	* 613.6	31.9	2126.0	79.5	7.968	* 31.5	2126.4	78.1	11.728	7.931	8.793	24.7	1.6	
517	1042	4.899	34.786	2326.	2231.	* 2243	* 586.7	38.9	2118.4	81.9	7.983	* 38.3	2126.3	80.3	11.361	7.945	8.817	26.3	2.9	
518	1128	4.821	34.751	2332.	2221.	* 2292	* 523.2	27.5	2183.2	98.3	8.831	* 27.1	2185.4	98.5	18.281	7.988	8.982	33.8	18.2	
519	1281	4.842	34.814	2338.	2221.	* 2231	* 531.3	27.9	2184.8	89.2	8.825	* 27.4	2186.3	87.3	18.515	7.978	8.898	31.9	8.1	
520	1381	4.875	34.926	2335.	2284.	* *	* 459.3	24.1	2078.8	101.1	8.883	* 23.6	2081.5	98.9	9.277	7.833	1.812	42.6	18.6	
521	1488	4.651	34.966	2335.	2194.	* 2283	* 426.1	22.5	2065.6	106.5	8.111	* 22.1	2067.9	104.1	8.765	8.857	1.867	46.9	22.6	
522	1498	4.385	34.983	2333.	2177.	* 2197	* 382.1	28.4	2041.7	114.9	8.152	* 19.9	2045.8	112.1	8.845	8.894	1.158	54.1	29.5	
523	1593	4.173	34.984	2336.	2181.	* 2184	* 381.8	28.5	2046.2	114.3	8.152	* 28.8	2049.6	111.3	8.114	8.891	1.142	52.4	27.5	
181	1644	4.829	34.985	2334.	2174.	* *	* 367.3	19.8	2037.1	117.1	8.166	* 19.4	2048.7	114.8	7.898	8.183	1.169	54.6	29.5	
524	1688	3.962	34.981	2333.	2188.	* 2198	* 382.9	28.7	2046.2	113.1	8.156	* 28.2	2049.9	109.9	8.236	8.885	1.127	58.1	24.9	
182	1791	3.754	34.973	2328.	2169.	* 2281	* 364.7	19.9	2032.7	116.4	8.167	* 19.4	2036.6	113.8	7.984	8.898	1.159	52.2	26.7	
183	1939	3.526	34.964	2334.	2181.	* 2179	* 376.5	28.7	2047.3	113.8	8.155	* 28.1	2051.5	109.4	8.321	8.886	1.121	47.1	21.2	
184	2092	3.486	34.961	2332.	2178.	* 2196	* 353.3	19.5	2032.4	118.1	8.179	* 18.9	2037.8	114.8	7.983	8.898	1.169	58.2	23.8	
185	2243	3.298	34.957	2333.	2177.	* 2198	* 365.8	28.3	2042.8	114.7	8.163	* 19.7	2046.9	118.4	8.334	8.878	1.132	45.1	18.2	
186	2393	3.164	34.951	2333.	2169.	* 2189	* 346.1	19.3	2036.4	119.3	8.186	* 18.6	2033.7	114.6	8.867	8.893	1.174	47.7	28.4	
187	2548	3.837	34.944	2339.	2188.	* 2196	* 356.6	28.8	2043.5	118.5	8.175	* 19.3	2049.1	111.6	8.385	8.877	1.143	43.1	15.3	
188	2698	2.973	34.941	2337.	2177.	* *	* 353.1	19.8	2048.1	117.8	8.178	* 19.1	2046.1	111.8	8.436	8.874	1.146	41.7	13.4	
189	2837	2.866	34.931	2341.	2182.	* 2193	* 355.8	28.8	2045.4	118.6	8.176	* 19.2	2051.7	111.1	8.585	8.866	1.138	39.3	18.6	
110	2979	2.768	34.926	2342.	2184.	* 2285	* 356.1	28.2	2047.8	116.8	8.175	* 19.3	2054.4	118.3	8.725	8.859	1.129	36.9	7.6	
111	3129	2.677	34.928	2348.	2196.	* 2199	* 368.6	28.5	2054.3	115.8	8.171	* 19.6	2061.4	109.1	8.939	8.649	1.116	33.9	4.1	
112	3288	2.599	34.915	2346.	2187.	* 2198	* 352.7	28.1	2058.2	116.7	8.179	* 19.1	2057.5	118.4	8.887	8.851	1.138	33.4	3.1	
115	3438	2.516	34.912	2358.	2191.	* 2211	* 352.4	28.1	2054.1	116.8	8.188	* 19.2	2061.7	118.2	9.883	8.846	1.127	31.2	8.3	
116	3589	2.439	34.985	2344.	2183.	* *	* 345.4	19.8	2045.4	117.8	8.186	* 18.8	2053.4	116.8	8.998	8.846	1.134	29.9	-1.5	
117	3742	2.342	34.896	2347.	2191.	* 2189	* 355.8	28.5	2055.6	115.8	8.175	* 19.4	2063.8	107.8	9.361	8.829	1.183	24.9	-7.1	
116	3891	2.385	34.898	2342.	2188.	* 2192	* 341.1	19.6	2042.8	116.3	8.198	* 16.6	2058.7	116.7	9.157	8.838	1.133	25.8	-6.7	
119	4839	2.278	34.894	2347.	2187.	* 2195	* 346.8	28.6	2049.8	117.3	8.193	* 18.8	2058.8	109.4	9.384	8.828	1.119	22.5	-16.6	
120	4185	2.223	34.886	2347.	2191.	* 2283	* 354.1	28.5	2055.6	115.8	8.176	* 19.3	2064.8	106.9	9.716	8.813	1.094	18.8	-15.7	
121	4333	2.124	34.872	2353.	2288.	* 2221	* 368.9	28.9	2067.7	113.4	8.178	* 19.7	2075.2	105.1	16.884	8.888	1.875	14.1	-28.2	
122	4488	1.779	34.833	2361.	2218.	* 2235	* 382.4	21.3	2076.3	112.4	8.168	* 28.6	2086.1	103.9	16.181	7.992	1.861	18.5	-24.4	
123	4683	1.635	34.811	2366.	2231.	* 2236	* 481.9	23.8	2183.6	103.7	8.128	* 22.3	2113.3	95.4	11.317	7.946	8.973	8.6	-35.4	
124	4721	1.581	34.886	2366.	2225.	* 2249	* 383.8	22.8	2055.3	106.9	8.145	* 21.3	2105.4	98.2	11.881	7.959	1.882	1.8	-34.9	

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 48 1 19 10 72 0848 3 56.8 N 39 31.0 W 4273
 48 7 20 10 72 0159 3 53.0 N 39 32.0 W 4824

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (00/KG)	TIT (E-6)	GC TC02 (M/KG)	CALC PARAMETERS P=1ATH.T=INSITU										DELTA CO3- (M/KG)	DELTA CO3- (ARAG) (M/KG)	
							PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	AM (E-9)	PH			ICP (E-6)
701	1	27.637	35.906	2366.	2006.	* 2012	* 366.8	9.7	1741.5	254.6	8.238	* 9.7	1741.5	254.8	5.786	8.238	2.688	209.0	189.5
702	36	27.563	35.993	2366.	2005.	* 2019	* 364.3	9.7	1739.9	253.4	8.240	* 9.7	1748.0	253.4	5.772	8.239	2.694	218.2	189.9
703	80	27.531	36.032	2370.	2011.	*	* 369.2	9.8	1746.9	254.3	8.235	* 9.8	1747.1	254.1	5.849	8.233	2.604	208.7	188.3
704	135	21.274	36.304	2387.	2096.	* 2189	* 399.5	12.4	1876.6	287.8	8.192	* 12.4	1876.9	286.7	6.493	8.188	2.199	169.7	148.1
705	214	18.709	35.006	2321.	2168.	* 2175	* 474.5	20.3	2019.9	119.8	8.009	* 20.3	2020.3	119.4	8.294	8.001	1.225	72.1	51.0
706	296	9.481	34.872	2313.	2184.	* 2191	* 551.6	24.6	2050.3	101.0	8.025	* 24.5	2050.9	100.6	9.606	8.014	1.020	52.6	31.3
707	374	8.321	34.754	2311.	2203.	* 2216	* 606.0	28.2	2005.7	89.2	7.984	* 29.0	2006.4	88.6	10.727	7.970	0.903	40.0	10.5
708	444	7.582	34.662	2309.	2193.	* 2213	* 557.9	26.6	2073.7	92.7	8.013	* 26.5	2074.6	92.0	10.007	7.996	0.933	42.8	21.1
709	510	6.094	34.638	2309.	2222.	* 2230	* 663.6	32.5	2111.5	78.0	7.940	* 32.3	2112.4	77.3	12.016	7.926	0.794	27.5	5.6
710	592	6.150	34.589	2306.	2224.	* 2246	* 669.5	33.6	2115.1	73.3	7.935	* 33.3	2116.2	74.5	12.259	7.912	0.705	24.1	1.9
711	667	5.474	34.540	2310.	2225.	* 2245	* 636.2	32.6	2115.5	76.7	7.952	* 32.5	2116.7	75.7	11.855	7.926	0.767	24.7	2.4
712	742	5.050	34.543	2309.	2221.	* 2237	* 613.2	32.8	2111.0	78.0	7.966	* 31.7	2112.3	77.8	11.565	7.937	0.779	25.3	2.0
715	811	4.845	34.564	2312.	2236.	* 2251	* 637.8	33.5	2121.4	73.1	7.956	* 33.2	2122.9	73.9	12.002	7.918	0.749	21.7	-1.0
716	862	4.710	34.594	2313.	2227.	* 2244	* 616.4	32.6	2117.4	77.1	7.963	* 32.2	2119.0	75.8	11.797	7.928	0.769	23.0	0.1
717	939	4.610	34.617	2316.	2226.	* 2226	* 597.3	31.6	2115.3	79.1	7.976	* 31.3	2117.8	77.7	11.514	7.939	0.708	24.4	1.3
718	998	4.565	34.655	2317.	2223.	* 2246	* 579.4	30.7	2111.2	81.1	7.980	* 30.4	2113.0	79.6	11.260	7.940	0.809	25.9	2.6
719	1057	4.613	34.713	2324.	2227.	* 2232	* 571.0	30.2	2114.0	82.0	7.995	* 29.0	2116.0	81.2	11.136	7.953	0.826	27.0	3.6
720	1123	4.944	34.733	2319.	2214.	* 2228	* 533.5	28.4	2090.8	86.7	8.019	* 28.0	2101.0	85.0	10.590	7.975	0.865	30.2	6.6
721	1173	4.982	34.792	2323.	2217.	* 2243	* 534.8	28.3	2101.3	67.4	8.020	* 27.9	2103.6	85.5	10.610	7.974	0.872	36.3	6.6
722	1221	4.989	34.826	2321.	2201.	*	* 404.0	25.6	2000.7	94.7	8.059	* 25.2	2003.1	92.7	9.733	8.012	0.946	37.1	13.3
723	1284	4.600	34.805	2322.	2202.	* 2211	* 405.5	25.7	2001.6	94.7	8.050	* 25.2	2004.1	92.6	9.817	8.000	0.947	36.5	12.5
101	1301	4.693	34.855	2329.	2196.	*	* 446.0	25.6	2070.4	102.0	8.092	* 23.2	2073.1	99.7	9.075	8.042	1.020	43.4	19.4
724	1345	4.509	34.913	2326.	2186.	* 2222	* 423.1	22.5	2057.8	105.7	8.112	* 22.0	2066.6	103.3	8.706	8.060	1.050	46.7	22.5
102	1400	4.414	34.932	2329.	2189.	* 2180	* 433.8	23.1	2062.5	103.4	8.102	* 22.6	2065.4	101.0	8.947	8.048	1.034	43.8	19.5
103	1552	4.260	34.971	2326.	2180.	*	* 403.9	21.6	2049.3	109.1	8.129	* 21.2	2052.6	106.3	8.536	8.059	1.009	47.7	23.0
104	1702	4.021	34.976	2324.	2172.	*	* 383.7	20.7	2039.6	112.3	8.148	* 20.2	2042.7	109.1	8.201	8.082	1.119	49.2	24.0
105	1649	3.701	34.969	2326.	2172.	* 2190	* 375.9	20.5	2030.1	113.4	8.155	* 19.9	2042.1	110.0	8.249	8.084	1.127	40.6	23.0
106	1990	3.603	34.964	2325.	2166.	*	* 360.0	20.1	2032.0	115.1	8.163	* 19.5	2037.2	111.3	8.172	8.080	1.141	40.6	22.5
107	2139	3.300	34.950	2336.	2172.	* 2262	* 362.0	20.0	2036.2	115.8	8.169	* 19.4	2040.9	111.7	8.202	8.086	1.145	47.5	20.9
108	2289	3.200	34.949	2332.	2170.	* 2182	* 350.7	19.5	2032.4	110.1	8.101	* 16.9	2037.4	113.7	8.000	8.092	1.165	47.9	20.0
109	2430	3.073	34.943	2331.	2176.	*	* 364.5	20.4	2041.6	114.6	8.103	* 19.7	2046.9	109.4	8.496	8.071	1.121	42.0	14.5
110	2587	2.944	34.937	2333.	2176.	*	* 330.0	20.2	2040.7	115.2	8.172	* 19.4	2046.3	110.3	8.400	8.071	1.129	41.2	13.3
111	2739	2.832	34.930	2341.	2183.	* 2102	* 356.7	20.1	2046.9	116.6	8.174	* 19.4	2052.9	110.7	8.550	8.060	1.134	40.0	11.6
112	2800	2.746	34.921	2336.	2199.	* 2106	* 406.4	23.0	2072.0	104.0	8.123	* 22.1	2078.6	98.9	9.700	8.010	1.612	26.5	-2.5
115	3050	2.632	34.919	2339.	2189.	* 2222	* 372.4	21.2	2056.5	111.4	8.157	* 20.3	2063.1	105.7	9.164	8.030	1.002	31.4	1.0
116	3199	2.600	34.915	2336.	2102.	*	* 361.5	20.6	2047.9	113.6	8.160	* 19.7	2054.9	107.5	9.057	8.043	1.100	31.4	1.4
117	3350	2.533	34.912	2339.	2105.	*	* 361.2	20.6	2056.0	113.6	8.160	* 19.6	2058.1	107.2	9.169	8.038	1.097	29.3	-1.2
110	3500	2.495	34.913	2333.	2171.	* 2220	* 337.0	19.3	2032.4	119.3	8.193	* 10.4	2040.2	112.5	8.771	8.057	1.151	32.7	1.6
119	3652	2.303	34.901	2333.	2103.	* 2203	* 362.3	20.6	2049.9	112.3	8.166	* 19.7	2057.9	105.4	9.400	8.023	1.070	23.7	-0.0
120	3601	2.300	34.892	2337.	2170.	* 2190	* 346.4	20.0	2041.6	116.5	8.183	* 10.9	2050.0	109.1	9.220	8.035	1.116	25.4	-6.0
121	3952	2.197	34.864	2342.	2191.	* 2190	* 363.9	21.0	2056.6	111.9	8.165	* 19.9	2066.6	104.5	9.772	8.016	1.060	10.7	-14.1
122	4052	2.040	34.864	2346.	2192.	* 2235	* 355.9	20.7	2057.5	113.9	8.174	* 19.5	2066.4	106.1	9.663	8.015	1.004	10.9	-14.4
123	4152	1.850	34.841	2333.	2216.	*	* 301.1	22.3	2079.9	107.0	8.140	* 21.1	2000.0	100.1	10.373	7.904	1.022	11.4	-22.2
124	4240	1.655	34.823	2330.	2213.	*	* 374.4	22.1	2081.9	109.0	8.155	* 20.0	2091.1	101.1	10.290	7.900	1.032	11.1	-23.0

GEOSSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 42 1 21 10 72 1207 8 58.0 N 37 4.8 W 4535
 42 3 21 10 72 1047 8 58.3 N 37 3.5 W 4534
 42 5 21 10 72 2314 8 58.0 N 37 3.0 W 4522

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS						*CALC PARAMETERS P=1ATH,T=INSITU*						CALC PARAMETERS P,T=INSITU								
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (EQ/KG)	TIT TC02 (M/KG)	* GC TC02 (M/KG)	* GC TC02 (E-6)	* PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)			(E-6)	(E-6)
501	7	27.299	35.933	2370.	2089.	* 2019	*	361.5	9.7	1743.6	255.7	8.243	* 9.6	1743.7	255.7	5.724	8.242	2.693	218.6	198.4
502	37	27.236	35.978	2367.	1994.	* 2000	*	341.4	9.1	1721.4	263.5	8.261	* 9.1	1721.5	263.4	5.494	8.268	2.777	218.2	197.8
503	82	27.217	35.973	2370.	2013.	*	*	367.2	9.8	1758.2	253.0	8.237	* 9.8	1758.4	252.8	5.833	8.234	2.665	207.3	186.9
504	114	23.185	36.162	2373.	2057.	*	*	374.9	11.1	1920.5	225.4	8.219	* 11.1	1828.8	225.2	6.893	8.215	2.383	179.3	158.8
505	144	14.295	35.973	2353.	2143.	*	*	429.7	16.4	1975.2	151.5	8.142	* 16.4	1975.5	151.2	7.295	8.137	1.976	184.6	83.8
506	194	12.240	35.185	2327.	2142.	* 2161	*	441.6	18.8	1989.2	134.8	8.122	* 18.8	1989.6	134.5	7.672	8.115	1.387	87.4	66.4
507	264	12.880	35.164	2331.	2151.	* 2173	*	453.1	18.6	2000.5	131.9	8.112	* 18.5	2001.1	131.4	7.898	8.103	1.355	83.9	62.7
508	346	10.656	34.998	2318.	2164.	*	*	494.8	21.2	2027.1	115.7	8.073	* 21.1	2027.8	115.1	8.707	8.068	1.181	66.9	45.5
509	422	8.187	34.733	2313.	2190.	*	*	543.8	25.4	2067.4	97.3	8.027	* 25.2	2068.2	96.6	9.752	8.011	0.983	47.6	26.8
510	495	7.305	34.641	2308.	2202.	*	*	587.7	28.3	2085.9	87.8	7.992	* 28.1	2086.8	87.8	10.651	7.973	0.884	37.5	19.6
511	577	6.460	34.570	2307.	2208.	*	*	597.0	29.6	2094.5	93.9	7.982	* 29.4	2095.5	93.1	10.972	7.968	0.842	32.8	18.7
512	656	5.927	34.549	2306.	2205.	* 2231	*	575.3	29.1	2091.1	84.8	7.994	* 28.8	2092.3	83.8	10.741	7.969	0.849	32.9	18.6
515	743	5.126	34.514	2311.	2225.	* 2239	*	625.8	32.5	2115.3	77.2	7.959	* 32.2	2116.7	76.1	11.752	7.938	0.770	24.5	1.9
516	824	4.768	34.922	2313.	2214.	* 2240	*	559.3	29.5	2100.9	83.6	8.002	* 29.2	2102.5	82.4	10.714	7.978	0.834	38.0	7.3
517	903	4.593	34.573	2319.	2220.	*	*	550.3	29.6	2106.7	83.7	8.003	* 29.3	2108.4	82.3	10.769	7.968	0.834	29.3	6.3
518	974	4.503	34.634	2318.	2211.	*	*	525.7	28.0	2095.2	87.8	8.026	* 27.6	2097.1	86.3	10.273	7.908	0.876	32.7	9.5
519	1045	4.437	34.693	2322.	2223.	*	*	557.8	29.7	2109.6	83.7	8.003	* 29.3	2111.6	82.1	10.913	7.962	0.835	28.0	4.6
520	1140	4.575	34.784	2323.	2200.	* 2320	*	473.6	25.1	2078.5	96.4	8.058	* 24.7	2080.8	94.5	9.465	8.024	0.963	39.5	15.9
521	1256	4.459	34.897	2320.	2195.	* 2213	*	446.2	23.7	2070.9	101.4	8.091	* 23.3	2073.5	99.2	9.868	8.043	1.015	43.3	19.4
522	1356	4.306	34.929	2326.	2184.	* 2201	*	414.6	22.2	2055.8	106.8	8.119	* 21.7	2057.9	104.4	8.575	8.067	1.069	47.6	23.4
523	1456	4.220	34.952	2327.	2186.	*	*	416.3	22.3	2057.5	106.2	8.117	* 21.9	2060.6	103.6	8.690	8.061	1.062	45.9	21.4
101	1490	4.200	34.961	2327.	2186.	*	*	416.0	22.3	2057.5	106.2	8.117	* 21.9	2060.6	103.5	8.717	8.060	1.061	45.4	20.8
524	1562	4.199	34.967	2323.	2170.	*	*	383.4	20.6	2036.6	112.8	8.140	* 20.1	2039.9	109.9	8.161	8.080	1.127	51.3	25.9
182	1645	4.032	34.960	2326.	2169.	* 2181	*	372.3	20.1	2033.7	115.2	8.160	* 20.6	2037.3	112.1	8.018	8.096	1.149	52.7	27.6
183	1790	3.804	34.971	2329.	2170.	* 2171	*	384.5	20.9	2045.2	111.8	8.147	* 20.4	2049.1	109.5	8.368	8.077	1.112	47.6	22.1
184	1949	3.691	34.970	2326.	2171.	* 2190	*	372.3	20.4	2036.6	114.8	8.150	* 19.8	2040.9	110.4	8.260	8.083	1.131	40.0	22.1
105	2090	3.496	34.966	2320.	2173.	* 2182	*	369.9	20.4	2030.6	114.8	8.160	* 19.8	2043.2	110.1	8.331	8.079	1.120	46.2	19.8
106	2227	3.365	34.961	2329.	2162.	* 2174	*	341.1	18.9	2022.2	120.9	8.191	* 18.3	2027.2	116.5	7.843	8.105	1.194	51.4	24.6
107	2376	3.182	34.949	2332.	2179.	* 2100	*	370.1	20.7	2045.4	113.8	8.160	* 20.0	2050.5	108.5	8.564	8.067	1.111	41.7	14.4
108	2496	3.017	34.941	2333.	2170.	* 2102	*	342.6	19.2	2030.9	119.9	8.190	* 18.5	2036.4	115.0	8.072	8.093	1.170	47.8	19.3
109	2717	2.874	34.931	2343.	2170.	* 2100	*	342.1	19.3	2030.7	120.0	8.191	* 18.5	2044.0	114.7	8.206	8.086	1.174	44.2	15.0
110	2836	2.826	34.934	2334.	2177.	* 2199	*	357.2	20.2	2041.6	115.2	8.173	* 19.4	2047.0	109.8	8.660	8.062	1.125	38.0	9.2
111	2995	2.705	34.920	2342.	2190.	* 2193	*	369.5	21.0	2056.4	112.7	8.161	* 20.1	2062.9	107.0	9.039	8.044	1.096	33.4	4.1
112	3145	2.564	34.920	2342.	2180.	* 2183	*	345.7	19.6	2042.1	118.3	8.196	* 18.8	2049.1	112.2	8.632	8.064	1.140	36.0	6.9
115	3305	2.591	34.910	2341.	2187.	* 2109	*	362.6	20.7	2052.6	113.7	8.167	* 19.7	2059.9	107.4	9.153	8.038	1.100	30.1	-0.9
116	3454	2.401	34.911	2341.	2180.	* 2106	*	345.3	19.0	2042.5	117.7	8.106	* 18.0	2050.2	111.0	8.007	8.051	1.136	31.0	0.9
117	3601	2.432	34.906	2344.	2176.	* 2190	*	330.3	18.9	2035.3	121.0	8.203	* 18.0	2043.4	114.6	8.646	8.063	1.173	33.6	2.1
118	3000	2.346	34.901	2342.	2176.	* 2100	*	332.7	19.1	2036.3	120.5	8.200	* 18.1	2044.9	113.0	8.075	8.052	1.156	29.4	-2.9
119	3959	2.213	34.886	2345.	2194.	* 2102	*	364.0	21.1	2060.9	112.0	8.164	* 19.9	2069.5	104.5	9.707	8.009	1.069	10.7	-14.1
120	4069	1.972	34.854	2353.	2204.	* 2211	*	368.3	21.5	2071.4	111.2	8.161	* 20.3	2060.2	103.5	9.965	8.002	1.050	16.0	-17.3
121	4206	1.247	34.777	2371.	2240.	* 2241	*	430.4	25.0	2125.0	97.1	8.181	* 24.4	2133.7	99.9	11.632	7.934	0.916	0.0	-34.0
122	4205	1.065	34.755	2374.	2240.	* 2249	*	419.6	25.3	2123.0	98.9	8.111	* 23.9	2132.7	91.4	11.472	7.940	0.931	0.3	-34.1
123	4362	1.020	34.730	2370.	2233.	* 2261	*	422.5	25.6	2129.1	98.4	8.109	* 24.1	2130.2	90.0	11.614	7.935	0.925	-1.5	-36.1
124	4495	1.022	34.740	2374.	2230.	*	*	424.0	25.7	2126.6	97.7	8.107	* 24.1	2136.0	89.9	11.817	7.927	0.916	-4.3	-39.9

GEOSecs ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 46 1 23 10 72 1151 0 59.3 S 34 2.2 W 4440
 46 3 23 10 72 1015 0 59.7 S 34 2.2 W 4444
 46 5 23 10 72 2227 0 59.9 S 34 0.5 W 4306

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (E0/XG)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	CALC PARAMETERS P=1ATH,T=INSITU						CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (M/KG) (E-6)	DELTA CO3= (ARAG) (M/KG) (E-6)	
							PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AM (E-9)	PH			ICP (E-6)
501	9	26.66	36.856	2373.	2198.	* 2036	* 331.0	9.8	1723.0	266.0	8.271	* 9.0	1723.0	266.0	5.350	0.271	2.012	221.0	200.7
502	73	26.23	36.894	2374.	2021.	* 2040	* 361.0	9.9	1761.2	249.9	8.239	* 9.9	1761.4	249.7	5.795	0.237	2.642	204.2	193.0
504	152	13.82	35.296	2330.	2156.	*	* 490.1	19.5	2007.0	120.7	8.005	* 19.4	2009.1	120.4	8.323	0.000	1.329	81.7	60.0
505	217	12.12	35.173	2329.	2104.	*	* 563.0	23.1	2049.4	111.5	8.020	* 23.0	2049.9	111.1	9.542	0.020	1.146	63.9	42.0
506	202	11.10	35.054	2319.	2106.	*	* 570.9	24.5	2057.5	104.0	8.013	* 24.4	2050.0	103.6	9.943	0.002	1.064	55.0	34.6
507	346	8.90	34.799	2312.	2200.	*	* 606.1	27.5	2000.9	91.6	7.966	* 27.4	2001.5	91.0	10.636	7.973	0.929	42.7	21.2
500	411	7.49	34.652	2307.	2204.	* 2234	* 605.4	29.0	2000.7	86.3	7.900	* 28.0	2009.5	85.7	10.051	7.963	0.071	36.0	15.1
510	540	6.51	34.573	2306.	2296.	* 2220	* 593.2	29.4	2052.2	84.4	7.904	* 29.2	2053.2	83.6	10.071	7.964	0.047	33.6	11.6
511	610	5.01	34.550	2307.	2216.	*	* 616.5	31.3	2105.0	79.7	7.967	* 31.1	2106.1	70.0	11.406	7.943	0.797	20.2	6.0
512	604	5.27	34.494	2305.	2212.	* 2229	* 577.2	29.9	2059.5	82.6	7.991	* 29.6	2100.0	81.6	10.051	7.963	0.023	30.4	0.0
515	701	4.93	34.461	2300.	2209.	* 2231	* 560.0	29.4	2096.0	83.6	8.001	* 29.1	2097.3	82.5	10.622	7.974	0.034	31.2	0.7
516	793	4.649	34.505	2312.	2210.	* 2216	* 577.6	30.6	2106.4	81.1	7.989	* 30.3	2107.9	79.9	11.021	7.950	0.000	27.0	9.1
517	090	4.430	34.555	2312.	2226.	* 2232	* 609.2	32.5	2116.5	77.0	7.966	* 32.1	2110.1	75.7	11.712	7.931	0.767	22.0	-0.1
519	1065	4.451	34.730	2322.	2210.	*	* 530.0	20.7	2103.0	86.3	8.017	* 20.3	2105.1	84.6	10.593	7.975	0.062	30.3	6.9
520	1107	4.475	34.009	2319.	2207.	*	* 509.1	27.1	2009.5	90.4	8.030	* 26.7	2091.7	80.6	10.109	7.995	0.904	34.0	10.4
521	1194	4.436	34.054	2323.	2200.	*	* 472.2	25.1	2070.5	96.3	8.060	* 24.7	2000.9	94.4	9.503	8.022	0.964	39.0	15.2
522	1253	4.426	34.004	2325.	2190.	*	* 435.5	23.2	2063.9	102.9	8.100	* 22.0	2066.5	100.7	8.072	8.052	1.030	44.0	20.9
523	1205	4.415	34.097	2322.	2190.	*	* 443.6	23.6	2065.2	101.2	8.093	* 23.2	2067.0	99.0	9.060	8.043	1.012	42.0	10.0
101	1344	4.322	34.920	2331.	2191.	* 2223	* 421.9	22.5	2062.6	105.0	8.113	* 22.1	2063.4	103.5	8.602	8.061	1.059	46.0	22.6
102	1395	4.300	34.923	2324.	2100.	* 2203	* 430.6	23.0	2061.6	103.4	8.104	* 22.6	2064.5	100.9	8.911	8.050	1.033	43.0	19.5
103	1493	4.210	34.929	2326.	2106.	* 2204	* 410.5	22.5	2057.9	105.6	8.115	* 22.0	2061.0	103.0	8.761	8.057	1.054	45.0	20.4
104	1593	4.141	34.962	2327.	2100.	*	* 369.6	19.9	2031.7	116.4	8.163	* 19.4	2033.2	113.4	7.910	8.102	1.162	54.5	29.6
105	1694	4.006	34.973	2327.	2175.	* 2105	* 306.1	20.0	2041.7	112.5	8.146	* 20.3	2045.4	109.3	8.307	8.001	1.121	49.5	24.3
106	1043	3.702	34.966	2325.	2165.	* 2100	* 361.7	19.7	2020.4	116.9	8.170	* 19.2	2032.4	113.4	7.960	8.059	1.162	52.1	26.4
107	1992	3.593	34.963	2329.	2175.	* 2172	* 373.7	20.5	2041.0	113.5	8.157	* 19.9	2045.4	109.7	8.316	8.000	1.124	46.9	20.9
100	2202	3.297	34.950	2329.	2160.	*	* 336.6	10.7	2019.2	122.2	8.196	* 10.1	2024.3	117.7	7.794	8.100	1.206	51.9	24.9
109	2492	3.029	34.937	2333.	2100.	* 2109	* 365.1	20.5	2045.4	114.2	8.163	* 19.7	2050.0	109.5	8.542	8.060	1.121	41.5	13.0
110	2641	2.950	34.934	2334.	2177.	* 2104	* 350.0	20.2	2041.6	115.2	8.172	* 19.4	2047.4	110.2	8.532	8.069	1.120	40.6	12.4
111	2792	2.055	34.929	2339.	2103.	*	* 361.0	20.4	2047.9	114.0	8.170	* 19.6	2054.0	109.5	8.607	8.061	1.121	30.2	9.5
112	2991	2.772	34.920	2335.	2173.	* 2191	* 345.5	19.6	2033.3	110.1	8.106	* 10.7	2042.0	112.3	8.524	8.069	1.150	30.0	9.4
115	3169	2.656	34.922	2340.	2103.	* 2107	* 356.6	20.3	2047.3	115.4	8.174	* 19.4	2054.3	109.4	8.904	8.050	1.120	33.7	3.0
116	3399	2.521	34.907	2340.	2174.	* 2205	* 335.1	19.1	2034.2	120.6	8.197	* 10.2	2041.9	113.9	8.609	8.063	1.166	35.4	4.7
117	3694	2.410	34.902	2330.	2103.	* 2194	* 356.0	20.5	2040.4	114.1	8.172	* 19.4	2056.5	107.1	9.372	8.020	1.096	24.0	-7.0
110	3021	2.356	34.097	2341.	2173.	* 2100	* 320.5	10.9	2032.4	121.7	8.205	* 17.9	2041.1	114.1	8.793	8.056	1.167	30.1	-2.1
119	3955	2.250	34.000	2344.	2109.	* 2195	* 356.4	20.6	2054.1	114.4	8.173	* 19.4	2062.7	106.0	9.561	8.020	1.093	21.3	-11.4
120	3903	2.237	34.003	2343.	2177.	* 2197	* 331.7	19.2	2037.2	120.6	8.201	* 10.1	2046.2	112.7	9.007	8.045	1.153	26.6	-6.3
121	4034	2.042	34.061	2350.	2203.	* 2217	* 373.1	21.7	2071.4	109.9	8.156	* 20.5	2000.1	102.4	10.056	7.990	1.046	15.4	-17.7
122	4139	1.501	34.003	2360.	2222.	* 2244	* 390.0	23.1	2093.0	105.0	8.130	* 21.0	2102.6	97.5	10.601	7.975	0.995	0.0	-24.0
123	4279	1.221	34.765	2372.	2244.	* 2292	* 415.5	25.0	2119.2	99.0	8.115	* 23.5	2120.2	92.3	11.350	7.945	0.941	1.4	-32.9
124	4422	0.907	34.730	2373.	2291.	* 2260	* 420.1	26.0	2120.3	96.7	8.102	* 24.5	2137.5	89.0	11.063	7.926	0.906	-4.2	-39.1

GEOSECS ATLANTIC STATION

STATION	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
48	1	25 18 72	2183 4 8.8 S	29 8.8 W	5079
48	9	27 18 72	1747 3 59.8 S	29 1.8 W	5832
48	18	28 18 72	3853 3 58.8 S	29 4.8 W	5838

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3= (CALC)	DELTA CO3= (ARRG)
				TALK (EQ/KG) (E-6)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	PH	ICP (E-6)		
981	11	28.15	38.88	2384.	2838.	* 2842	* 375.7	18.3	1782.8	245.7	8.227	* 18.3	1782.8	245.7	5.928	8.227	2.599	288.6	188.3
982	38	28.87	38.88	2384.	2825.	*	* 352.9	9.7	1781.2	254.1	8.249	* 9.7	1761.2	254.1	5.647	8.248	2.687	288.9	188.5
983	61	28.82	38.88	2383.	2835.	* 2842	* 365.5	18.2	1777.9	248.9	8.232	* 18.2	1778.1	246.7	5.881	8.231	2.618	281.3	181.8
984	82	24.98	36.85	2382.	2843.	* 2868	* 387.3	18.4	1792.1	248.5	8.232	* 18.4	1792.3	248.3	5.899	8.229	2.539	194.7	174.3
985	119	17.12	35.88	2385.	2159.	* 2168	* 583.4	17.6	1998.5	158.8	8.893	* 17.6	1998.8	158.6	8.149	8.889	1.581	184.4	83.7
986	153	13.74	35.38	2348.	2158.	* 2167	* 463.9	18.8	1993.1	138.9	8.118	* 18.8	1993.4	138.6	7.862	8.184	1.437	91.9	71.8
987	193	11.48	35.89	2327.	2187.	* 2217	* 562.7	23.6	2855.2	188.2	8.826	* 23.5	2855.6	187.9	9.566	8.819	1.118	68.8	39.8
988	274	9.87	34.89	2322.	2188.	* 2218	* 455.2	28.1	2815.7	128.2	8.182	* 28.8	2828.3	119.7	8.884	8.892	1.223	72.8	58.7
989	353	8.32	34.72	2315.	2215.	* 2226	* 644.8	28.9	2899.8	85.2	7.968	* 29.8	2188.5	84.7	11.381	7.947	8.962	36.3	14.8
918	433	7.19	34.63	2389.	2226.	* 2259	* 694.8	33.6	2116.3	76.1	7.923	* 33.4	2117.1	75.9	12.352	7.988	8.787	26.4	4.7
911	512	6.11	34.53	2389.	2227.	* 2244	* 668.8	33.6	2118.8	75.4	7.936	* 33.4	2119.8	74.6	12.144	7.916	8.756	24.9	2.9
912	594	5.34	34.48	2388.	2218.	* 2248	* 574.3	29.7	2897.2	83.2	7.993	* 29.4	2898.3	82.3	18.711	7.978	8.832	31.8	9.6
915	681	4.714	34.46	2317.	2228.	* 2247	* 682.2	31.8	2117.5	78.7	7.973	* 31.5	2118.8	77.7	11.385	7.947	8.785	26.5	4.1
918	759	4.439	34.47	2317.	2224.	* 2258	* 578.5	38.9	2112.5	88.6	7.988	* 38.6	2113.9	79.5	11.881	7.959	8.883	27.7	5.8
917	841	4.298	34.58	2315.	2238.	*	* 593.7	31.8	2119.5	78.6	7.978	* 31.5	2121.1	77.4	11.362	7.945	8.783	24.9	2.8
919	1881	4.254	34.68	2326.	2224.	* 2235	* 542.8	29.1	2189.5	95.4	8.815	* 28.7	2111.5	83.8	18.582	7.975	8.858	38.8	6.7
920	1898	4.211	34.67	2328.	2214.	* 2233	* 584.1	27.1	2896.4	98.5	8.843	* 26.7	2898.5	88.8	9.998	8.888	8.982	34.2	18.7
921	1178	4.355	34.78	2331.	2216.	* 2236	* 499.6	26.7	2897.8	92.3	8.847	* 26.3	2899.4	98.4	9.961	8.882	8.921	35.1	11.4
922	1267	4.488	34.85	2338.	2282.	*	* 457.7	24.4	2878.3	99.3	8.882	* 24.8	2888.9	97.1	9.275	8.833	8.992	41.1	17.1
923	1357	4.368	34.88	2333.	2284.	*	* 454.6	24.3	2888.8	99.8	8.885	* 23.8	2882.7	97.4	9.285	8.832	8.996	48.6	16.4
181	1482	4.352	34.915	2333.	2196.	* 2212	* 431.3	23.8	2868.8	184.2	8.185	* 22.6	2871.7	181.7	8.892	8.851	1.841	44.6	28.2
924	1446	4.388	34.92	2329.	2188.	* 2217	* 412.7	22.1	2896.8	187.5	8.121	* 21.6	2855.5	184.5	8.557	8.868	1.874	47.3	22.8
182	1578	4.863	34.547	2338.	2188.	* 2284	* 391.1	21.1	2847.5	111.4	8.141	* 28.6	2858.5	188.5	8.385	8.881	1.111	45.7	24.9
183	1732	3.798	34.955	2333.	2181.	* 2198	* 382.6	28.8	2847.7	112.5	8.149	* 28.3	2851.5	189.2	8.283	8.882	1.119	48.7	23.4
184	1951	3.553	34.955	2333.	2178.	* 2281	* 353.4	19.4	2831.8	118.7	8.179	* 18.9	2836.2	115.8	7.878	8.184	1.178	52.6	26.6
185	2151	3.348	34.947	2339.	2185.	* 2187	* 372.7	28.6	2858.7	113.7	8.159	* 28.8	2855.3	189.6	8.488	8.876	1.123	45.2	18.7
186	2358	3.148	34.932	2348.	2178.	* 2197	* 351.9	19.6	2848.8	118.4	8.181	* 19.8	2845.2	113.8	8.134	8.898	1.165	47.3	28.1
187	2558	2.967	34.921	2344.	2196.	*	* 382.9	21.5	2854.1	118.4	8.148	* 28.7	2869.6	185.6	8.934	8.849	1.881	37.8	9.2
188	2758	2.838	34.921	2345.	2187.	* 2197	* 357.9	28.2	2858.6	116.2	8.174	* 15.4	2856.7	118.9	8.568	8.867	1.133	48.8	11.5
189	2958	2.715	34.518	2347.	2192.	*	* 363.4	28.6	2857.8	114.4	8.168	* 15.7	2863.4	188.8	8.848	8.853	1.114	33.7	6.5
118	3158	2.645	34.915	2344.	2181.	* 2286	* 343.7	19.5	2842.5	118.9	8.185	* 18.7	2849.6	112.8	8.585	8.866	1.154	37.3	7.5
111	3358	2.585	34.913	2348.	2192.	* 2281	* 355.5	28.5	2856.5	115.8	8.172	* 19.5	2863.9	188.6	8.893	8.841	1.111	38.7	8.2
112	3548	2.526	34.988	2344.	2186.	* 2197	* 353.1	28.2	2849.8	116.8	8.178	* 15.2	2857.6	189.2	9.138	8.848	1.118	28.9	-2.4
115	3748	2.387	34.898	2347.	2154.	* 2288	* 363.3	28.5	2859.9	113.2	8.167	* 19.8	2868.1	186.1	9.542	8.828	1.886	23.2	-8.8
116	3898	2.131	34.863	2353.	2192.	* 2217	* 343.2	15.9	2854.1	118.8	8.189	* 18.8	2862.8	118.4	5.188	8.837	1.128	25.3	-7.3
117	4048	1.713	34.822	2367.	2227.	* 2237	* 398.8	23.8	2897.6	186.4	8.141	* 21.7	2186.3	99.8	18.449	7.981	1.811	11.7	-21.6
118	4197	1.321	34.783	2374.	2237.	* 2264	* 393.5	23.5	2188.5	184.9	8.137	* 22.2	2117.5	97.3	18.695	7.971	8.992	7.6	-26.3
119	4346	1.072	34.792	2381.	2237.	* 2266	* 428.7	25.8	2133.4	97.5	8.185	* 24.3	2142.4	98.3	11.683	7.932	8.928	-1.7	-36.3
120	4494	0.968	34.741	2381.	2253.	* 2278	* 414.2	25.1	2127.7	188.2	8.117	* 23.6	2137.2	92.2	11.537	7.938	8.939	-2.8	-37.2
121	4644	0.863	34.729	2385.	2272.	* 2289	* 458.8	27.3	2152.8	92.1	8.877	* 26.2	2161.5	84.3	12.841	7.891	8.859	-12.2	-48.1
122	4791	0.736	34.718	2382.	2269.	* 2293	* 454.9	27.8	2149.1	92.8	8.879	* 26.1	2158.5	84.8	12.978	7.897	8.855	-14.9	-51.4
123	4939	0.661	34.783	2387.	2275.	* 2274	* 458.3	28.1	2155.2	91.7	8.877	* 26.3	2163.3	83.4	13.226	7.875	8.845	-17.9	-55.1
124	5869	0.639	34.695	2389.	2273.	* 2298	* 457.2	28.1	2153.3	91.6	8.877	* 26.3	2163.6	83.1	13.372	7.874	8.846	-20.3	-58.8

214

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 49 1 29 18 72 8485 7 56.8 S 28 12.8 W 5336
 49 5 29 18 72 1553 7 55.5 S 28 14.5 W

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS				*CALC PARAMETERS P=1ATM,T=INSITU*										CALC PARAMETERS P,T=INSITU							
SAMP NO.	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TALK (ED/KG)	TIT (M/KG)	* GC (E-6)	* TCO2 (M/KG)	* PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARRG)	
																			(E-6)	(E-6)	(E-6)
581	2	26.11	36.282	2392.	2829.	* 2831	* 352.2	9.7	1762.5	256.9	8.258	*	9.7	1762.5	256.9	5.624	8.258	2.732	211.8	191.6	
582	32	26.87	36.275	2394.	2815.	*	* 328.1	9.8	1738.5	267.5	8.275	*	9.8	1738.5	267.4	5.326	8.274	2.844	222.2	281.9	
583	64	26.86	36.274	2393.	2827.	* 2832	* 347.1	9.5	1758.8	258.9	8.253	*	9.5	1758.8	258.7	5.583	8.253	2.751	213.3	193.8	
584	98	25.47	36.533	2418.	2835.	* 2848	* 333.5	9.3	1768.9	264.8	8.269	*	9.3	1761.1	264.6	5.422	8.264	2.934	219.1	198.7	
585	116	22.51	36.493	2408.	2888.	* 2888	* 375.8	11.3	1849.7	227.8	8.228	*	11.3	1858.8	226.7	6.884	8.216	2.425	188.9	168.4	
586	143	19.14	36.159	2388.	2112.	* 2148	* 483.9	13.3	1987.9	198.8	8.182	*	13.3	1988.2	198.5	6.655	8.177	2.819	144.3	123.6	
587	169	16.89	36.697	2336.	2168.	* 2165	* 584.8	18.2	1997.8	144.8	8.887	*	18.2	1998.2	143.6	8.288	8.882	1.583	97.8	76.2	
588	195	13.67	35.414	2338.	2147.	*	* 459.4	17.9	1989.8	139.3	8.113	*	17.8	1998.2	139.8	7.833	8.106	1.443	92.8	71.8	
589	256	11.38	35.188	2322.	2194.	*	* 685.2	25.4	2857.2	181.4	7.997	*	25.4	2867.7	181.8	18.388	7.987	1.839	33.4	32.3	
518	382	9.51	34.869	2314.	2193.	* 2217	* 583.2	26.8	2878.3	96.6	8.884	*	25.9	2878.9	96.2	18.179	7.992	8.983	48.2	26.8	
511	348	7.76	34.682	2318.	2198.	*	* 574.7	27.2	2879.6	91.2	8.882	*	27.1	2888.2	90.6	18.258	7.989	8.921	42.2	28.7	
512	394	7.17	34.689	2385.	2197.	*	* 575.8	27.8	2888.4	88.8	7.999	*	27.7	2881.1	88.2	18.372	7.984	8.895	39.4	17.7	
515	459	6.73	34.587	2389.	2229.	* 2226	* 696.9	34.3	2128.2	74.6	7.921	*	34.1	2121.8	73.9	12.483	7.984	8.749	24.6	2.8	
516	508	6.42	34.562	2386.	2221.	* 2238	* 661.8	32.8	2111.3	76.8	7.941	*	32.6	2112.2	76.1	11.988	7.921	8.771	26.4	4.5	
517	689	5.78	34.516	2386.	2228.	* 2242	* 679.8	34.5	2128.2	73.2	7.928	*	34.3	2121.3	72.4	12.488	7.984	8.733	21.9	-8.3	
518	711	5.88	34.475	2388.	2223.	* 2227	* 626.8	32.6	2113.9	76.5	7.958	*	32.4	2115.2	75.5	11.758	7.938	8.763	24.1	1.6	
519	818	4.628	34.466	2312.	2231.	* 2243	* 636.2	33.7	2122.7	74.6	7.958	*	33.4	2124.1	73.5	12.872	7.918	8.742	21.3	-1.5	
520	969	4.281	34.495	2317.	2216.	* 2238	* 548.6	29.1	2182.2	84.7	8.814	*	28.8	2184.8	83.3	18.584	7.979	8.842	38.2	7.2	
521	1089	4.824	34.555	2328.	2232.	* 2226	* 592.4	32.1	2121.9	78.8	7.977	*	31.7	2123.8	76.5	11.546	7.938	8.775	22.8	-8.7	
522	1186	3.986	34.638	2324.	2214.	* 2222	* 586.3	27.4	2897.1	89.5	8.848	*	27.8	2899.3	87.7	18.872	7.997	8.898	33.8	9.4	
523	1285	4.133	34.737	2322.	2217.	* 2214	* 527.9	28.4	2181.9	86.7	8.823	*	28.8	2184.2	84.8	18.568	7.976	8.854	29.3	5.5	
181	1285	4.164	34.881	2328.	2282.	*	* 458.1	24.6	2879.3	98.8	8.888	*	24.2	2882.8	95.8	9.322	8.838	8.978	39.6	15.6	
524	1483	4.228	34.878	2326.	2187.	* 2288	* 428.7	22.6	2859.3	185.1	8.113	*	22.1	2852.2	182.6	8.729	8.859	1.849	45.4	21.1	
182	1484	4.184	34.924	2327.	2163.	* 2283	* 357.3	19.3	2824.4	119.4	8.176	*	18.8	2827.6	116.5	7.683	8.119	1.193	58.6	34.8	
183	1685	3.883	34.953	2338.	2178.	* 2177	* 382.2	28.8	2844.7	112.5	8.149	*	28.3	2848.4	109.3	8.235	8.884	1.128	49.5	24.3	
184	1887	3.491	34.947	2329.	2172.	* 2218	* 365.5	28.1	2836.6	115.3	8.165	*	19.6	2848.7	111.7	8.884	8.892	1.144	49.9	24.1	
185	2084	3.272	34.939	2337.	2188.	* 2191	* 364.3	28.2	2844.3	115.4	8.167	*	19.6	2848.9	111.5	8.194	8.887	1.142	47.7	21.3	
186	2288	3.834	34.922	2348.	2182.	* 2196	* 359.3	28.1	2843.8	116.8	8.172	*	19.5	2858.8	111.7	8.244	8.884	1.143	45.9	18.9	
187	2479	2.883	34.915	2343.	2193.	* 2217	* 372.5	21.8	2859.3	112.7	8.159	*	20.3	2864.7	108.1	8.663	8.862	1.186	48.2	12.5	
189	2878	2.721	34.911	2346.	2193.	* 2182	* 367.9	20.9	2858.9	113.3	8.163	*	20.8	2863.2	107.8	8.892	8.851	1.184	33.5	6.6	
111	3278	2.589	34.918	2343.	2191.	* 2198	* 367.4	20.9	2857.5	112.6	8.163	*	20.8	2864.6	106.4	9.232	8.833	1.889	29.4	-8.9	
112	3478	2.498	34.984	2344.	2176.	* 2197	* 338.9	18.9	2835.3	121.8	8.283	*	18.8	2843.2	114.8	8.558	8.868	1.175	33.4	4.3	
115	3698	2.388	34.888	2349.	2196.	*	* 362.9	28.9	2861.7	113.4	8.167	*	19.8	2869.8	106.4	9.483	8.823	1.888	24.1	-7.7	
116	3893	1.971	34.848	2354.	2197.	* 2212	* 349.5	28.4	2861.8	115.6	8.182	*	19.3	2869.6	108.1	9.346	8.825	1.185	23.8	-9.6	
117	4093	1.542	34.883	2363.	2231.	* 2227	* 482.6	23.9	2184.1	183.8	8.127	*	22.5	2112.8	95.7	18.832	7.963	8.976	7.6	-25.9	
118	4294	1.139	34.762	2373.	2221.	* 2263	* 354.3	21.3	2886.2	113.4	8.177	*	20.1	2899.8	105.2	9.827	8.888	1.872	14.8	-28.4	
119	4457	8.918	34.737	2377.	2256.	* 2266	* 432.8	26.3	2133.6	96.2	8.899	*	24.7	2142.9	88.4	12.825	7.928	8.988	-5.9	-41.1	
120	4697	8.823	34.724	2388.	2257.	* 2278	* 425.7	26.8	2133.6	97.4	8.185	*	24.3	2143.4	89.2	12.883	7.918	8.988	-8.2	-44.2	
121	4898	8.749	34.714	2381.	2269.	* 2293	* 458.4	28.8	2149.4	91.5	8.876	*	26.3	2159.4	83.4	13.199	7.879	8.848	-17.2	-54.2	
122	5898	8.571	34.708	2388.	2261.	* 2266	* 434.7	26.7	2139.1	95.2	8.897	*	24.9	2149.6	86.5	12.812	7.892	8.888	-17.4	-53.3	
123	5298	8.644	34.697	2384.	2278.	*	* 458.9	27.7	2149.6	92.7	8.883	*	25.8	2168.4	83.8	13.498	7.878	8.852	-23.5	-62.2	
124	5513	8.621	34.699	2383.	2246.	* 2287	* 384.9	23.7	2117.2	185.2	8.145	*	21.9	2129.8	95.1	11.884	7.925	8.967	-16.8	-55.6	

3050505 ATLANTIC STATION CAST DATE TIME LA LONGITUDE BOT DEPTH
 53 2 7 11 72 0701 11 27 58.7 W 5537
 53 5 7 11 72 1431 11 59.7 S 28 1.8 W 5525
 53 7 7 11 72 2038 11 59.8 S 28 1.5 W 5531

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS				CALC PARAMETERS P=10M,T=INSITU										CALC PARAMETERS P,T=INSITU						
SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/100)	TALK (ED/KG)	TIT (E-6)	GC TC02 *(E-6)	TC02 *(M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (E-6)	PH	H2CO3 (M/KG)	HCO3- (E-6)	CO3= (M/KG)	PH	PH	[CP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARRG) (M/KG)
561	7	26.83	36.628	2485	2027	*	2075	* 338.9	9.1	1748.6	269.3	8.272	* 9.1	1748.6	269.3	5.344	8.272	2.891	224.4	284.1
562	46	25.63	36.833	2425	2847	*	*	* 338.5	9.4	1778.8	268.8	8.263	* 9.4	1778.9	266.7	5.453	8.263	2.886	221.6	281.3
563	94	24.15	36.961	2435	2865	*	*	* 333.8	9.6	1794.3	261.1	8.267	* 9.6	1794.5	268.9	5.448	8.264	2.822	215.5	195.1
564	148	20.81	36.399	2403	2885	*	*	* 338.4	18.9	1836.1	224.8	8.258	* 18.9	1858.5	223.7	5.689	8.245	2.587	177.6	156.9
565	198	15.31	35.818	2348	2126	*	* 2141	* 485.4	15.8	1942.6	163.8	8.166	* 14.9	1942.5	162.6	6.934	8.159	1.697	115.7	94.8
566	272	11.76	35.899	2318	2165	*	*	* 528.6	21.6	2827.9	115.5	8.856	* 21.5	2828.4	115.1	8.991	8.846	1.184	67.4	46.2
567	358	9.83	34.796	2314	2186	*	* 2223	* 544.6	24.7	2868.9	166.4	8.829	* 24.6	2861.6	99.8	9.658	8.815	1.818	51.4	29.9
568	424	7.36	34.634	2384	2288	*	*	* 596.3	26.7	2884.6	86.7	7.985	* 28.5	2885.4	96.1	10.737	7.969	8.874	37.8	15.3
569	539	6.87	34.523	2385	2285	*	*	* 561.7	29.3	2891.5	84.3	7.998	* 29.1	2892.5	83.4	10.722	7.978	8.844	33.5	11.5
511	797	4.44	34.432	2312	2216	*	*	* 564.1	36.1	2183.8	82.1	7.998	* 29.8	2185.3	88.9	10.886	7.966	8.817	28.8	6.1
512	895	4.87	34.447	2315	2216	*	* 2239	* 521.8	28.2	2855.1	86.7	8.828	* 27.8	2856.9	85.3	10.157	7.993	8.861	32.3	9.3
515	994	3.93	34.511	2316	2222	*	*	* 555.1	38.2	2189.8	82.8	8.883	* 29.8	2111.7	88.5	10.872	7.964	8.815	26.7	3.4
516	1067	3.83	34.563	2322	2228	*	*	* 538.9	29.8	2185.9	85.1	8.821	* 28.5	2188.8	83.5	16.581	7.979	8.846	29.1	5.6
517	1144	3.86	34.636	2323	2214	*	* 2239	* 586.7	27.6	2897.6	88.8	8.839	* 27.2	2899.8	97.8	10.131	7.994	8.883	31.9	8.3
518	1219	3.91	34.715	2328	2287	*	*	* 469.2	25.5	2886.1	95.4	8.878	* 25.1	2888.6	93.4	9.489	8.823	8.958	37.7	13.8
520	1369	4.819	34.832	2326	2195	*	*	* 448.4	23.8	2878.5	188.7	8.895	* 23.4	2873.3	98.4	9.886	8.842	1.884	41.4	17.1
521	1442	4.833	34.877	2325	2199	*	* 2228	* 456.3	24.7	2876.4	97.9	8.888	* 24.2	2879.3	95.5	9.452	8.824	8.977	37.9	13.4
522	1519	3.936	34.982	2327	2185	*	*	* 489.8	22.2	2856.8	186.8	8.123	* 21.7	2859.2	184.1	8.628	8.864	1.863	45.8	21.1
523	1592	3.821	34.913	2338	2179	*	*	* 384.3	28.9	2846.2	111.9	8.148	* 28.4	2849.6	188.9	8.282	8.886	1.115	45.9	25.8
281	1661	3.741	34.924	2329	2188	*	*	* 388.4	21.2	2848.8	118.8	8.143	* 28.7	2851.6	187.7	8.345	8.679	1.183	48.1	23.8
524	1695	3.688	34.938	2329	2176	*	* 2198	* 377.6	28.7	2842.3	113.8	8.153	* 28.2	2846.8	189.9	8.165	8.888	1.125	49.9	24.7
282	1859	3.453	34.935	2332	2165	*	* 2214	* 343.1	16.9	2825.8	121.1	8.198	* 18.4	2829.2	117.4	7.613	8.118	1.283	55.9	38.2
283	2482	3.222	34.931	2333	2178	*	* 2212	* 348.6	19.4	2831.9	118.7	8.183	* 18.8	2836.5	114.7	7.876	8.184	1.174	51.1	24.8
284	2262	3.824	34.922	2338	2179	*	*	* 356.4	28.8	2842.5	116.6	8.175	* 19.3	2847.5	112.2	8.178	8.887	1.149	46.6	19.7
285	2466	2.874	34.911	2348	2185	*	* 2223	* 363.8	28.5	2858.2	114.3	8.167	* 19.8	2855.6	189.6	8.484	8.871	1.122	41.9	14.3
286	2662	2.775	34.985	2342	2188	*	* 2223	* 365.4	28.7	2853.5	113.8	8.165	* 19.9	2859.4	188.7	8.676	8.862	1.113	38.9	18.6
287	2854	2.711	34.984	2348	2194	*	*	* 365.7	28.7	2855.4	113.9	8.166	* 19.9	2865.7	188.4	8.826	8.854	1.118	36.3	7.4
288	3866	2.648	34.988	2347	2191	*	* 2223	* 368.1	28.5	2855.5	115.8	8.171	* 19.6	2862.3	189.2	8.872	8.852	1.117	34.7	5.1
289	3269	2.583	34.898	2348	2192	*	* 2289	* 359.2	28.5	2856.5	115.8	8.172	* 19.5	2863.7	188.7	9.818	8.845	1.112	31.8	1.6
218	3478	2.492	34.894	2346	2188	*	*	* 353.1	28.2	2851.7	116.1	8.178	* 19.2	2859.4	189.4	9.868	8.843	1.119	38.1	-8.9
211	3623	2.373	34.884	2347	2186	*	* 2221	* 344.7	19.8	2848.4	117.8	8.187	* 18.8	2856.5	118.7	8.994	8.846	1.132	29.4	-2.2
212	3773	2.193	34.878	2356	2283	*	* 2289	* 388.4	22.8	2874.2	188.8	8.149	* 28.9	2882.3	181.8	9.988	8.881	1.841	18.4	-13.8
215	3887	2.887	34.848	2354	2289	*	*	* 378.4	22.8	2878.1	188.9	8.151	* 28.9	2886.5	181.7	10.835	7.998	1.838	16.7	-15.9
216	3985	1.618	34.826	2357	2219	*	* 2258	* 394.4	23.1	2898.8	185.1	8.133	* 21.9	2899.2	97.9	10.527	7.978	8.999	11.4	-21.6
217	4136	1.459	34.789	2367	2229	*	*	* 391.1	23.3	2188.4	185.3	8.135	* 22.8	2189.3	97.8	10.598	7.975	8.997	9.1	-24.6
218	4285	1.188	34.764	2378	2248	*	*	* 489.3	24.8	2114.4	181.8	8.128	* 23.2	2123.4	93.4	11.215	7.958	8.952	2.4	-31.9
219	4486	0.964	34.748	2378	2248	*	* 2281	* 422.5	25.6	2122.7	97.7	8.187	* 24.1	2132.8	89.9	11.795	7.928	8.915	-4.2	-39.4
220	4685	0.838	34.724	2376	2252	*	*	* 421.7	25.7	2128.5	97.8	8.188	* 24.1	2138.3	89.6	11.981	7.922	8.912	-7.6	-43.6
221	4887	0.761	34.718	2379	2257	*	*	* 427.5	26.1	2134.8	96.9	8.183	* 24.4	2144.1	88.4	12.368	7.988	8.988	-12.8	-48.9
222	5885	6.712	34.786	2379	2264	*	* 2285	* 447.1	27.4	2143.6	93.8	8.886	* 25.6	2154.6	84.4	13.134	7.882	8.859	-19.2	-57.8
223	5285	6.652	34.696	2379	2265	*	*	* 458.1	27.6	2144.8	92.6	8.883	* 25.7	2155.5	83.7	13.476	7.878	8.852	-23.3	-62.8
224	5523	6.581	34.695	2377	2266	*	*	* 457.3	28.2	2146.9	98.9	8.878	* 26.2	2158.1	81.7	14.814	7.853	8.831	-29.5	-69.3

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 54 2 8 11 72 2245 15 2.5 S 29 32.0 W 5182
 54 5 9 11 72 1181 15 2.5 S 29 31.8 W
 54 8 9 11 72 1918 15 1.2 S 29 38.5 W 5891

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (M/KG)	TIT TC02 (M/KG)	GC TC02 (M/KG)	CALC. PARAMETERS P=10M,T=INSITU						CALC. PARAMETERS P,T=INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARRG) (M/KG)	
							PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AM (E-9)	PH			ICP (E-6)
581	8	28.32	36.823	2424.	2841.	* 2838	* 348.3	9.3	1781.3	278.4	0.263	* 9.3	1781.3	278.4	5.448	0.264	2.919	225.5	285.3
582	66	25.22	37.838	2442.	2884.	* 2863	* 348.2	9.3	1787.5	267.8	0.284	* 9.5	1787.7	266.8	5.473	0.262	2.897	221.6	281.3
583	138	22.91	36.831	2432.	2861.	* 2858	* 313.7	9.3	1798.6	281.1	0.286	* 9.3	1791.8	268.7	5.235	0.281	2.815	214.9	194.5
584	188	19.84	36.157	2387.	2892.	* 2187	* 355.2	11.8	1871.8	288.9	0.229	* 11.7	1872.2	288.8	5.995	0.222	2.285	161.6	148.8
585	238	15.62	35.619	2351.	2189.	* 2112	* 382.2	14.8	1923.8	172.8	0.185	* 14.8	1923.6	171.5	6.594	0.181	1.798	124.4	183.4
586	298	13.11	35.252	2329.	2135.	* 2168	* 435.8	17.3	1977.8	148.7	0.138	* 17.2	1977.7	148.1	7.596	0.119	1.448	92.4	71.2
587	324	12.18	35.148	2323.	2158.	* 2171	* 488.7	28.8	2812.8	124.8	0.883	* 19.9	2812.7	123.4	8.493	0.871	1.272	75.5	54.2
588	384	18.68	34.958	2318.	2165.	* 2178	* 515.6	22.1	2835.2	111.7	0.858	* 22.8	2835.9	111.8	9.862	0.843	1.138	62.7	41.3
589	439	8.28	34.674	2388.	2172.	* 2188	* 588.5	23.4	2845.3	183.1	0.858	* 23.2	2846.4	182.4	9.892	0.841	1.841	53.3	31.6
518	458	6.58	34.557	2387.	2181.	* 2199	* 588.8	24.5	2858.1	98.4	0.853	* 24.3	2855.1	97.8	5.235	0.835	0.989	48.1	28.2
511	589	5.28	34.427	2384.	2194.	* 2283	* 522.9	27.1	2877.8	89.3	0.838	* 26.9	2878.8	88.4	9.841	0.887	0.892	38.8	15.8
512	689	4.38	34.395	2313.	2155.	* 2228	* 478.5	25.8	2875.8	93.8	0.863	* 25.4	2877.2	92.4	9.281	0.836	0.532	41.1	18.7
515	798	3.88	34.419	2318.	2288.	* 2228	* 589.9	27.8	2892.2	88.2	0.839	* 27.3	2893.7	87.8	9.814	0.888	0.878	34.8	12.8
516	898	3.72	34.488	2323.	2217.	* 2234	* 513.5	28.1	2181.5	87.4	0.834	* 27.8	2183.2	86.8	18.832	7.999	0.885	32.9	9.9
517	998	3.68	34.533	2321.	2218.	*	* 524.8	28.7	2183.8	85.7	0.825	* 28.4	2185.5	84.2	18.338	7.986	0.852	38.3	7.8
518	1897	3.78	34.631	2327.	2216.	* 2222	* 498.5	27.2	2898.8	89.9	0.846	* 28.8	2181.8	88.2	9.938	0.883	0.895	33.5	9.9
519	1197	3.88	34.715	2328.	2289.	* 2289	* 488.6	26.2	2885.7	93.1	0.868	* 25.7	2892.1	91.2	9.693	0.814	0.928	35.7	11.8
520	1297	3.98	34.881	2329.	2281.	*	* 447.8	24.3	2877.6	99.1	0.888	* 23.9	2888.2	96.9	9.181	0.838	0.989	48.5	16.5
521	1395	3.88	34.868	2338.	2185.	* 2289	* 418.9	22.3	2868.4	188.3	0.122	* 21.9	2863.3	183.8	8.552	0.888	1.881	46.6	22.2
522	1495	3.78	34.898	2331.	2185.	* 2283	* 488.9	22.2	2859.5	188.5	0.125	* 21.7	2863.1	184.2	8.563	0.887	1.886	46.1	21.4
523	1595	3.61	34.988	2338.	2182.	*	* 388.6	21.3	2858.6	118.1	0.142	* 28.8	2854.8	187.2	8.383	0.881	1.887	48.2	23.2
281	1681	3.49	34.925	2331.	2182.	* 2198	* 384.8	21.2	2858.1	118.7	0.146	* 28.7	2853.7	187.6	8.383	0.881	1.182	47.7	22.6
524	1694	3.58	34.924	2333.	2175.	* 2187	* 364.1	28.1	2839.8	115.9	0.168	* 19.6	2842.7	112.7	7.982	0.182	1.154	52.7	27.9
282	1875	3.28	34.928	2333.	2172.	* 2288	* 353.7	15.7	2834.8	117.6	0.178	* 15.1	2838.9	114.8	7.847	0.185	1.167	52.2	28.4
283	2877	3.88	34.918	2338.	2181.	* 2283	* 361.2	28.2	2845.4	115.4	0.178	* 15.6	2858.8	111.4	8.138	0.898	1.141	47.7	21.3
285	2478	2.83	34.987	2345.	2198.	* 2218	* 364.6	28.6	2855.8	114.4	0.167	* 19.9	2868.4	189.7	8.582	0.878	1.123	41.8	14.2
288	2875	2.77	34.985	2341.	2198.	* 2283	* 372.2	21.1	2856.9	112.8	0.158	* 28.3	2862.7	187.8	8.839	0.854	1.895	36.9	8.7
287	2888	2.71	34.984	2344.	2185.	*	* 353.3	28.8	2848.3	116.6	0.178	* 19.2	2854.7	111.1	8.581	0.866	1.137	38.8	9.8
288	3888	2.641	34.984	2345.	2187.	* 2281	* 355.8	28.2	2858.7	116.1	0.176	* 19.3	2857.5	118.2	8.775	0.857	1.127	35.6	5.9
289	3288	2.612	34.989	2344.	2183.	* 2288	* 347.8	15.8	2845.4	117.8	0.184	* 18.9	2852.7	111.5	8.782	0.856	1.141	34.4	4.1
218	3482	2.493	34.988	2348.	2186.	*	* 345.8	19.7	2847.8	118.5	0.187	* 18.7	2855.5	111.7	8.874	0.852	1.143	32.2	1.1
211	3688	2.343	34.887	2348.	2151.	* 2286	* 357.8	28.6	2856.8	114.4	0.172	* 15.5	2864.1	187.4	9.368	0.829	1.898	29.3	-6.5
212	3878	2.838	34.857	2351.	2198.	* 2221	* 355.3	28.9	2863.7	113.4	0.171	* 19.8	2872.2	186.8	9.576	0.819	1.883	21.1	-11.4
215	3987	1.831	34.838	2383.	2289.	* 2231	* 356.8	28.9	2873.5	114.2	0.175	* 15.8	2882.7	186.6	5.585	0.818	1.888	28.1	-12.9
216	4887	1.638	34.813	2364.	2218.	* 2236	* 373.8	28.8	2888.3	189.7	0.157	* 28.8	2893.2	182.1	18.888	7.596	1.841	14.1	-19.3
217	4287	1.323	34.785	2369.	2233.	* 2258	* 394.8	23.6	2185.2	184.2	0.135	* 22.2	2114.3	96.5	18.837	7.963	0.984	5.5	-28.8
218	4389	1.164	34.763	2368.	2238.	*	* 482.8	24.2	2189.8	182.8	0.126	* 22.8	2119.8	94.2	11.169	7.952	0.968	1.6	-33.1
215	4486	1.058	34.758	2375.	2248.	* 2251	* 415.7	25.1	2121.8	99.3	0.114	* 23.6	2131.8	51.4	11.591	7.938	0.931	-2.6	-37.8
228	4588	0.958	34.748	2372.	2249.	* 2264	* 425.6	25.8	2126.8	97.2	0.185	* 24.2	2135.5	89.2	11.988	7.922	0.989	-6.4	-42.8
221	4678	0.875	34.731	2375.	2253.	* 2274	* 427.7	26.8	2138.3	96.8	0.183	* 24.4	2148.8	88.8	12.132	7.916	0.982	-8.5	-44.5
222	4787	8.778	34.719	2375.	2253.	* 2275	* 426.8	26.1	2138.2	96.7	0.184	* 24.4	2148.1	88.5	12.239	7.912	0.988	-18.4	-46.8
223	4883	8.818	34.781	2381.	2282.	* 2278	* 433.8	26.7	2148.1	95.2	0.897	* 25.8	2158.2	86.8	12.538	7.982	0.883	-13.6	-58.6
224	5881	8.455	34.691	2377.	2288.	* 2288	* 481.5	28.8	2149.8	89.8	0.872	* 26.7	2155.5	81.4	13.582	7.887	0.828	-22.4	-68.2

GEOSCI ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 55 1 11 11 72 0132 18 0.8 S 31 8.5 W 4694
 55 3 11 11 72 1123 17 59.5 S 31 2.8 W 4693
 55 7 11 11 72 1912 17 58.5 S 31 2.8 W 4718

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS				CALC PARAMETERS P=100M.T=INSITU				CALC PARAMETERS P.T=INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARRG) (M/KG)			
			SAL. (0/00)	TALK (EQ/KG)	TIT (E-6)	GC (M/KG)	PC02 (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)			PH	ICP (E-6)	
301	3	25.72	37.255	2456.	2074.	* 2055	* 347.6	9.6	1794.5	270.8	0.259	* 9.6	1794.5	270.8	5.512	0.259	2.948	225.2	205.1
302	20	25.20	37.261	2456.	2079.	* 2080	* 349.0	9.7	1802.8	266.5	0.256	* 9.7	1802.9	266.4	5.556	0.255	2.918	221.5	201.3
303	48	24.72	37.187	2455.	2076.	* 2102	* 337.0	9.5	1798.9	267.6	0.267	* 9.5	1799.8	267.5	5.426	0.265	2.916	222.4	202.2
304	82	24.14	37.142	2450.	2091.	* 2062	* 357.0	10.2	1826.7	254.8	0.245	* 10.2	1827.8	253.8	5.721	0.243	2.753	208.5	188.2
305	127	23.57	37.118	2447.	2059.	* 2092	* 306.4	8.9	1777.2	272.8	0.296	* 8.9	1777.6	272.5	5.185	0.292	2.964	226.9	206.5
306	176	19.82	36.278	2393.	2080.	* 2106	* 339.0	11.0	1848.4	228.6	0.247	* 11.0	1848.9	228.2	5.742	0.241	2.341	175.8	153.1
307	264	15.33	35.516	2345.	2084.	* 2080	* 339.5	12.6	1887.7	183.7	0.231	* 12.5	1888.3	183.1	6.000	0.222	1.907	135.9	114.0
308	337	12.01	35.100	2325.	2114.	* 2143	* 387.9	15.5	1947.8	150.7	0.173	* 15.5	1948.5	150.0	6.909	0.161	1.547	102.8	80.7
309	434	10.09	34.842	2315.	2143.	* 2160	* 428.7	18.8	1998.2	126.0	0.125	* 18.7	1999.2	125.2	7.774	0.109	1.279	76.3	54.7
310	535	7.37	34.571	2304.	2166.	* 2179	* 465.3	22.6	2038.3	105.1	0.080	* 22.4	2039.4	104.2	8.717	0.060	1.056	54.3	32.4
311	638	5.47	34.424	2305.	2183.	* 2212	* 483.8	24.9	2062.3	95.0	0.061	* 24.7	2063.6	94.7	9.180	0.037	0.956	44.0	21.8
312	677	4.82	34.395	2309.	2180.	* 2217	* 458.5	23.7	2056.6	99.6	0.088	* 23.5	2058.0	98.5	8.680	0.061	0.993	47.3	24.9
315	781	4.05	34.400	2315.	2197.	* 2217	* 473.8	25.7	2077.7	93.6	0.066	* 25.4	2079.3	92.3	9.217	0.035	0.931	48.3	17.6
316	879	3.69	34.441	2318.	2212.	* 2234	* 510.5	28.0	2096.0	87.2	0.033	* 27.7	2098.5	85.8	9.981	0.001	0.866	32.9	10.8
317	979	3.581	34.514	2322.	2218.	* 2247	* 510.1	28.5	2103.3	86.2	0.029	* 28.2	2105.1	84.7	10.211	7.991	0.857	31.0	7.7
318	1082	3.643	34.607	2326.	2205.	* 2241	* 461.9	25.4	2084.4	95.2	0.075	* 25.0	2086.6	93.4	9.263	0.033	0.948	38.9	15.4
319	1186	3.770	34.694	2326.	2209.	* 2234	* 479.0	26.2	2089.9	93.2	0.061	* 25.7	2092.1	91.2	9.661	0.015	0.928	35.0	12.0
320	1291	3.922	34.794	2327.	2199.	* 2223	* 448.1	24.3	2075.5	99.2	0.080	* 23.9	2078.2	97.0	9.160	0.030	0.909	40.7	16.6
321	1393	3.809	34.848	2330.	2180.	* 2209	* 407.9	22.2	2059.9	106.0	0.125	* 21.7	2061.9	104.3	8.452	0.071	1.066	47.1	22.9
322	1489	3.797	34.879	2328.	2191.	* 2221	* 428.3	22.9	2064.1	104.0	0.112	* 22.4	2067.2	101.4	8.818	0.055	1.037	43.3	18.7
323	1593	3.646	34.897	2328.	2180.	* 2202	* 388.4	21.3	2048.7	110.1	0.143	* 28.0	2052.1	107.1	8.380	0.001	1.096	48.1	23.2
181	1637	3.539	34.905	2333.	2172.	* 2190	* 357.7	19.7	2034.6	117.7	0.175	* 19.2	2038.2	114.6	7.734	0.112	1.172	55.1	30.1
324	1693	3.507	34.909	2331.	2175.	* *	* 368.3	20.3	2039.9	114.8	0.163	* 19.0	2043.6	111.6	7.909	0.090	1.142	51.6	26.4
182	1784	3.349	34.911	2331.	2180.	* *	* 377.0	20.9	2047.2	111.0	0.152	* 20.4	2051.1	108.5	8.253	0.083	1.111	47.7	22.2
183	1931	3.205	34.932	2333.	2174.	* *	* 350.0	19.9	2037.6	116.5	0.172	* 19.4	2041.9	112.0	7.984	0.098	1.155	50.5	24.6
184	2063	3.137	34.927	2336.	2166.	* 2194	* 333.3	18.6	2024.6	122.0	0.201	* 18.0	2029.3	118.7	7.577	0.120	1.215	54.9	20.5
185	2234	3.039	34.923	2339.	2174.	* *	* 343.4	19.2	2034.8	120.0	0.190	* 18.5	2039.8	115.6	7.806	0.103	1.104	50.3	23.4
186	2383	2.950	34.922	2337.	2182.	* 2176	* 364.2	20.5	2047.4	114.2	0.166	* 19.0	2052.6	109.7	8.430	0.074	1.123	42.0	15.5
187	2533	2.895	34.920	2340.	2177.	* 2187	* 346.3	19.5	2038.6	118.9	0.186	* 18.0	2044.2	114.0	8.170	0.080	1.167	45.5	17.7
188	2682	2.820	34.915	2339.	2186.	* *	* 367.3	20.0	2052.2	113.1	0.163	* 20.0	2050.0	108.0	8.740	0.059	1.105	37.9	9.6
189	2832	2.767	34.914	2342.	2180.	* 2180	* 346.0	19.6	2042.1	118.3	0.185	* 18.0	2048.4	112.0	8.405	0.075	1.154	41.0	12.2
110	2982	2.734	34.915	2341.	2179.	* 2185	* 346.2	19.6	2041.1	118.3	0.186	* 18.0	2047.0	112.5	8.513	0.070	1.151	39.0	9.7
111	3131	2.680	34.911	2341.	2184.	* *	* 357.0	20.3	2040.3	115.5	0.174	* 19.4	2055.1	109.5	8.877	0.052	1.120	34.3	4.5
112	3280	2.631	34.912	2339.	2181.	* 2191	* 353.1	20.1	2045.0	115.9	0.170	* 19.2	2052.3	109.6	8.917	0.050	1.121	32.6	2.2
115	3440	2.544	34.910	2341.	2181.	* 2195	* 348.2	19.9	2044.8	117.1	0.183	* 18.9	2051.6	110.5	8.937	0.049	1.130	31.5	0.6
116	3588	2.411	34.893	2342.	2182.	* *	* 346.4	19.9	2045.0	117.1	0.185	* 18.9	2053.0	110.2	9.022	0.045	1.127	29.3	-2.2
117	3737	2.256	34.877	2347.	2180.	* 2184	* 348.0	20.1	2051.2	116.7	0.183	* 19.0	2059.5	109.5	9.180	0.037	1.120	26.6	-5.4
118	3808	2.038	34.854	2351.	2195.	* *	* 330.5	19.2	2045.0	120.0	0.203	* 18.2	2053.0	113.1	8.000	0.051	1.155	29.1	-4.5
119	3987	1.932	34.831	2356.	2200.	* *	* 360.9	21.6	2075.0	110.6	0.161	* 20.4	2084.5	103.1	9.900	0.004	1.053	16.7	-16.4
120	4089	1.580	34.802	2362.	2225.	* 2236	* 394.3	23.4	2097.1	104.6	0.135	* 22.0	2105.0	97.2	10.629	7.974	0.992	9.2	-24.3
121	4190	1.320	34.778	2368.	2228.	* 2223	* 384.1	23.0	2090.6	106.4	0.145	* 21.6	2107.6	98.7	10.470	7.900	1.007	9.2	-24.8
122	4340	1.030	34.746	2369.	2246.	* *	* 426.1	25.8	2123.2	97.1	0.104	* 24.3	2132.2	89.6	11.723	7.931	0.912	-2.3	-36.9
123	4489	0.679	34.712	2376.	2256.	* 2267	* 430.7	26.4	2133.9	95.6	0.100	* 24.0	2143.2	87.9	12.023	7.920	0.895	-6.4	-41.7
124	4600	0.382	34.683	2375.	2257.	* 2252	* 431.7	26.0	2135.6	94.6	0.097	* 23.1	2145.3	86.6	12.314	7.910	0.880	-10.9	-47.8

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE 80T DEPTH
 56 1 12 11 72 2219 21 0.5 S 33 9.0 W 4323
 56 5 13 11 72 0824 21 2.0 S 33 0.3 W 4311
 56 7 13 11 72 1430 20 59.2 S 33 0.0 W 4322

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (M/KG)	TIT TC02 (M/KG)	*CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU							
						*GC TC02 (M/KG)	*PCO2 (ATM)	*H2CO3 (M/KG)	*HCO3- (M/KG)	*CO3= (M/KG)	*PH	*H2CO3 (M/KG)	*HCO3- (M/KG)	*CO3= (M/KG)	*PH	*PH	ICP (M/KG)	DELTA CO3= (M/KG)	DELTA CO3= (ARRG)
581	14	24.787	37.069	2433.	2856.	* 2874	* 332.4	9.4	1780.9	263.7	8.269	* 9.4	1780.9	263.7	5.330	8.268	2.837	228.8	288.6
582	77	23.637	37.069	2437.	2837.	* 2888	* 315.4	9.2	1780.6	267.2	8.285	* 9.1	1780.8	267.0	5.214	8.283	2.981	221.7	281.4
583	116	22.665	36.881	2424.	2839.	* 2888	* 316.7	9.5	1793.8	256.5	8.288	* 9.4	1793.4	256.2	5.289	8.277	2.778	218.5	198.1
584	136	20.952	36.573	2419.	2879.	* 2897	* 324.9	10.2	1829.4	239.4	8.268	* 10.2	1829.8	239.1	5.458	8.264	2.563	193.1	172.5
585	156	19.975	36.382	2392.	2867.	* 2183	* 324.1	10.4	1828.3	228.3	8.263	* 10.4	1828.7	227.9	5.519	8.258	2.438	181.7	161.1
586	177	18.925	36.183	2383.	2868.	* 2184	* 320.3	10.6	1836.3	221.1	8.264	* 10.6	1836.8	220.6	5.514	8.259	2.348	174.2	153.5
587	197	17.671	35.984	2365.	2870.	* 2183	* 326.2	11.2	1851.6	207.1	8.253	* 11.2	1852.1	206.7	5.669	8.246	2.173	168.8	139.2
588	216	16.969	35.788	2368.	2879.	* 2898	* 333.2	11.8	1869.6	197.6	8.241	* 11.8	1870.1	197.1	5.838	8.234	2.068	158.2	129.3
589	235	16.138	35.668	2352.	2868.	* 2111	* 316.3	11.4	1857.6	199.8	8.259	* 11.4	1858.2	198.4	5.689	8.251	2.074	151.4	138.4
510	301	14.218	35.356	2334.	2881.	* 2188	* 332.5	12.7	1896.4	177.8	8.234	* 12.7	1891.2	177.1	5.973	8.224	1.836	129.5	108.3
511	356	12.833	35.175	2324.	2889.	* 2126	* 348.4	13.6	1909.7	163.6	8.221	* 13.5	1918.6	164.9	6.198	8.208	1.708	116.8	95.4
512	415	11.691	35.036	2318.	2188.	* 2146	* 369.8	15.3	1943.2	149.5	8.187	* 15.2	1944.1	148.7	6.727	8.172	1.527	108.8	78.3
514	471	10.477	34.893	2312.	2123.	* 2168	* 392.3	17.8	1978.8	136.1	8.168	* 16.8	1971.8	135.1	7.282	8.143	1.382	86.8	64.4
515	523	9.117	34.723	2304.	2132.	* 2173	* 406.6	18.4	1988.3	129.3	8.141	* 18.3	1989.5	124.3	7.568	8.121	1.265	74.7	52.8
516	684	7.138	34.531	2296.	2156.	* 2192	* 453.7	22.1	2027.9	106.8	8.089	* 21.9	2029.2	104.9	8.585	8.066	1.062	54.3	32.4
517	692	5.482	34.418	2301.	2183.	* 2223	* 496.4	25.5	2084.8	93.5	8.051	* 25.3	2065.3	92.4	9.464	8.024	0.932	41.2	18.8
518	793	4.251	34.374	2308.	2183.	* 2223	* 452.8	24.3	2061.5	97.2	8.084	* 24.8	2063.1	95.9	8.846	8.053	0.966	43.8	21.8
519	892	3.681	34.487	2315.	2209.	* 2242	* 508.6	27.9	2094.8	87.1	8.036	* 27.6	2093.7	85.7	9.967	8.001	0.864	32.7	9.7
520	990	3.411	34.475	2321.	2217.	* 2245	* 513.2	28.4	2102.5	86.1	8.032	* 28.1	2104.4	84.5	10.149	7.994	0.854	38.7	7.4
521	1091	3.513	34.576	2326.	2218.	* 2245	* 475.8	26.2	2091.2	92.6	8.063	* 25.9	2093.4	90.8	9.534	8.021	0.928	36.1	12.6
522	1191	3.723	34.688	2322.	2204.	* 2233	* 473.1	25.9	2084.6	93.5	8.065	* 25.5	2086.9	91.6	9.575	8.019	0.931	36.1	12.3
101	1237	3.843	34.741	2331.	2197.	* 2215	* 428.8	23.3	2071.2	102.5	8.106	* 22.9	2073.7	100.3	8.755	8.058	1.022	44.5	20.5
523	1292	3.986	34.885	2328.	2188.	* 2223	* 434.9	23.5	2063.3	101.1	8.099	* 23.1	2066.8	98.3	8.942	8.049	1.009	42.6	18.5
102	1368	4.838	34.888	2328.	2188.	* 2223	* 394.6	21.3	2048.5	118.2	8.138	* 20.9	2051.4	107.7	8.235	8.084	1.101	58.6	26.3
104	1689	3.777	34.952	2327.	2173.	* 2203	* 375.9	20.5	2039.8	113.5	8.155	* 20.8	2042.7	110.3	8.128	8.098	1.138	58.4	25.3
105	1839	3.585	34.952	2323.	2158.	* 2197	* 346.9	19.8	2019.3	119.6	8.185	* 18.5	2023.4	116.1	7.692	8.114	1.189	54.7	29.1
106	1964	3.428	34.958	2329.	2161.	* 2188	* 339.8	18.8	2020.7	121.5	8.193	* 18.2	2025.1	117.6	7.638	8.117	1.205	53.1	29.1
107	2136	3.276	34.945	2328.	2163.	* 2198	* 344.2	19.1	2024.1	119.8	8.188	* 18.5	2028.9	115.6	7.852	8.105	1.184	51.3	24.8
108	2138	3.276	34.945	2338.	2168.	* 2202	* 331.3	19.5	2038.4	118.1	8.188	* 18.9	2033.1	114.8	7.991	8.097	1.167	49.7	23.1
109	2287	3.138	34.937	2327.	2168.	* 2191	* 338.8	18.9	2028.2	120.9	8.194	* 18.2	2025.3	116.4	7.843	8.106	1.192	58.6	23.6
110	2438	3.833	34.933	2333.	2170.	* 2209	* 346.2	19.4	2032.8	118.7	8.185	* 18.7	2037.4	113.9	8.183	8.091	1.167	46.6	19.1
111	2582	2.947	34.927	2338.	2163.	* 2203	* 324.9	18.3	2028.2	124.6	8.218	* 17.6	2026.1	119.4	7.768	8.118	1.222	58.4	22.4
112	2728	2.868	34.923	2339.	2177.	* 2195	* 347.8	19.6	2039.1	118.3	8.184	* 18.8	2043.2	113.8	8.352	8.078	1.157	42.4	14.8
113	2886	2.798	34.928	2334.	2174.	* 2204	* 338.8	19.8	2037.2	117.8	8.188	* 19.8	2043.6	111.4	8.545	8.068	1.141	39.1	18.1
116	3827	2.727	34.915	2339.	2173.	* 2208	* 337.4	19.1	2033.3	128.6	8.195	* 18.3	2048.1	114.6	8.368	8.078	1.173	48.6	11.2
117	3171	2.625	34.918	2348.	2173.	* 2199	* 334.8	19.8	2032.8	121.2	8.199	* 18.1	2048.8	114.9	8.399	8.076	1.176	39.2	9.2
118	3321	2.472	34.899	2343.	2179.	* 2211	* 338.8	19.4	2040.2	119.4	8.194	* 18.5	2047.6	112.9	8.623	8.064	1.159	35.3	4.9
119	3473	2.236	34.876	2344.	2181.	* 2218	* 337.9	19.5	2042.6	118.9	8.194	* 18.5	2058.4	112.1	8.748	8.059	1.146	32.5	1.4
120	3638	1.984	34.848	2351.	2208.	* 2219	* 361.9	21.2	2066.6	112.2	8.168	* 20.1	2074.6	105.3	9.436	8.025	1.076	23.6	-8.8
121	3777	1.987	34.889	2357.	2219.	* 2249	* 388.8	23.8	2089.5	105.6	8.148	* 21.8	2097.5	98.7	10.199	7.991	1.007	14.9	-17.4
122	3954	1.273	34.772	2364.	2238.	* 2254	* 397.8	23.8	2103.2	103.8	8.131	* 22.5	2111.6	95.9	10.612	7.974	0.977	9.5	-23.5
123	4138	1.088	34.744	2367.	2239.	* 2262	* 418.8	24.9	2114.3	99.8	8.118	* 23.5	2123.8	92.5	11.138	7.954	0.942	3.6	-38.2
124	4388	0.727	34.718	2373.	2253.	* 2288	* 436.6	26.7	2133.8	94.5	8.094	* 25.2	2142.7	87.1	11.981	7.922	0.887	-4.5	-39.1

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH

57	2	15 11 72	0350	23 59.3 S	35 0.8 W	4234
57	6	15 11 72	1013	23 58.0 S	35 0.3 W	4224
57	8	15 11 72	1811	23 55.5 S	35 3.8 W	4236

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/00)	TRK (ED-KG)	TIT (E-6)	GC TC02 (M/KG)	CALC PARAMETERS P=1ATM.T=INSITU					CALC PARAMETERS P.T=INSITU				DELTA CO3- (M/KG)	DELTA CO3- (ARAG)		
							PCO2 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3- (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3- (E-6)	AM (E-9)			PM (E-9)	ICP (E-6)
601	12	23.576	36.699	2421.	2047.	* 2047	* 314.2	9.2	1774.5	263.3	8.285	* 9.2	1774.5	263.3	5.187	8.285	2.832	218.2	198.8
602	47	23.168	36.864	2431.	2059.	* 2038	* 314.5	9.3	1786.3	262.5	8.285	* 9.3	1786.4	262.4	5.206	8.283	2.835	217.1	196.8
603	77	21.797	36.665	2423.	2054.	* 2065	* 298.8	9.1	1785.9	259.8	8.388	* 9.1	1786.1	258.8	5.839	8.298	2.782	213.3	192.9
604	116	20.437	36.428	2406.	2068.	* 2078	* 384.6	9.7	1807.6	242.8	8.288	* 9.7	1807.9	242.5	5.197	8.284	2.589	196.6	176.8
605	168	17.876	35.998	2384.	2080.	* 2023	* 321.3	11.8	1855.3	213.7	8.262	* 11.8	1855.8	213.3	5.947	8.256	2.258	166.8	146.1
607	287	14.687	35.478	2348.	2085.	* 2094	* 327.4	12.3	1867.8	184.8	8.243	* 12.3	1868.6	184.2	5.847	8.233	1.915	136.7	115.5
608	335	14.855	35.411	2345.	2089.	* 2093	* 328.9	12.7	1896.4	188.8	8.239	* 12.6	1897.2	179.2	5.928	8.228	1.869	131.3	118.1
609	385	13.114	35.271	2338.	2093.	* 2186	* 331.3	13.1	1987.5	172.4	8.234	* 13.1	1988.4	171.5	6.825	8.228	1.774	123.3	101.9
610	466	11.882	34.97	2315.	2132.	* 2151	* 419.3	17.8	1981.4	132.9	8.137	* 17.6	1982.4	132.8	7.558	8.128	1.353	82.9	61.3
612	505	8.888	34.613	2308.	2154.	* 2159	* 435.5	20.5	2018.9	114.6	8.112	* 20.3	2020.2	113.5	8.134	8.098	1.152	63.4	41.3
615	643	6.758	34.468	2305.	2159.	* 2199	* 433.6	21.3	2028.2	109.5	8.105	* 21.1	2029.5	108.4	8.232	8.084	1.096	57.7	35.4
617	742	5.815	34.343	2308.	2176.	* 2198	* 443.8	23.2	2031.5	101.3	8.094	* 23.8	2033.8	100.1	8.596	8.065	1.007	48.4	25.9
618	792	4.469	34.333	2309.	2186.	* 2217	* 462.3	24.7	2065.1	96.3	8.076	* 24.4	2066.7	94.9	9.081	8.046	0.956	42.9	28.1
621	942	3.624	34.378	2322.	2208.	* 2221	* 481.4	26.5	2098.8	91.6	8.059	* 26.1	2091.8	90.8	9.458	8.022	0.967	36.6	13.5
201	983	3.446	34.396	2333.	2228.	* 2245	* 513.8	28.4	2112.5	87.1	8.034	* 28.1	2114.4	85.5	10.095	7.996	0.862	31.7	8.5
623	1092	3.237	34.488	2331.	2224.	* 2242	* 582.3	28.8	2108.1	87.9	8.042	* 27.6	2110.2	86.2	10.021	7.999	0.871	31.5	7.9
202	1185	3.248	34.562	2335.	2228.	* 2259	* 584.9	28.1	2111.9	88.8	8.048	* 27.7	2114.2	86.1	10.142	7.994	0.872	30.6	6.8
203	1326	3.418	34.787	2336.	2216.	* 2239	* 465.7	25.8	2095.3	94.9	8.073	* 25.3	2098.8	92.7	9.531	8.021	0.943	36.8	11.8
205	1628	3.458	34.893	2334.	2185.	* 2221	* 385.1	21.3	2052.9	118.9	8.146	* 20.8	2056.4	107.9	8.259	8.083	1.183	48.5	23.5
206	1779	3.592	34.941	2335.	2213.	* 2197	* 465.2	25.5	2091.5	96.8	8.073	* 24.9	2095.1	93.8	9.924	8.063	0.952	32.2	6.8
207	1928	3.465	34.949	2337.	2174.	* 2204	* 393.5	19.5	2035.6	118.9	8.179	* 18.5	2039.9	115.2	7.852	8.105	1.188	53.8	27.1
208	2079	3.331	34.949	2336.	2179.	* 2208	* 364.9	20.2	2043.4	115.4	8.167	* 19.6	2047.9	111.4	8.201	8.086	1.142	47.7	21.4
209	2228	3.208	34.943	2342.	2178.	* 2197	* 348.9	19.4	2039.8	119.6	8.184	* 18.8	2044.8	115.2	7.973	8.098	1.188	50.8	23.2
210	2388	3.089	34.941	2337.	2180.	* 2204	* 362.8	20.2	2044.3	115.4	8.169	* 19.6	2049.6	118.9	8.382	8.077	1.136	44.1	16.8
211	2523	2.996	34.936	2341.	2180.	* 2204	* 332.1	19.8	2042.5	117.7	8.188	* 19.8	2048.1	112.8	8.273	8.082	1.156	44.5	16.7
212	2687	2.989	34.931	2348.	2176.	* 2199	* 344.0	19.4	2037.3	119.4	8.189	* 18.6	2043.3	114.1	8.232	8.085	1.169	44.8	15.7
215	2837	2.820	34.925	2345.	2184.	* 2212	* 358.5	19.8	2046.4	117.8	8.192	* 19.8	2052.7	112.3	8.476	8.072	1.149	48.5	11.7
216	2984	2.747	34.924	2341.	2183.	* 2199	* 355.6	20.1	2046.9	116.8	8.175	* 19.3	2053.4	118.3	8.721	8.059	1.129	36.8	7.5
217	3134	2.656	34.918	2344.	2184.	* 2208	* 358.6	19.9	2046.8	117.2	8.191	* 19.8	2053.8	111.2	8.727	8.059	1.138	35.9	6.1
218	3286	2.528	34.918	2346.	2182.	* 2218	* 348.4	19.4	2043.8	119.5	8.192	* 18.5	2058.4	113.1	8.618	8.063	1.157	35.9	5.6
219	3432	2.352	34.892	2349.	2192.	* 2219	* 354.4	20.4	2056.8	115.7	8.177	* 19.4	2063.6	109.1	9.062	8.043	1.115	38.1	-8.8
220	3579	1.992	34.855	2357.	2207.	* 2216	* 364.7	21.4	2073.9	111.7	8.164	* 20.3	2081.7	105.0	9.475	8.023	1.073	24.0	-7.5
221	3727	1.637	34.812	2367.	2220.	* 2247	* 391.3	23.1	2099.8	103.8	8.139	* 21.9	2107.8	99.8	10.183	7.992	1.011	16.8	-16.2
222	3873	1.287	34.776	2367.	2236.	* 2276	* 487.8	24.4	2118.2	101.4	8.122	* 23.1	2118.4	94.5	10.741	7.969	0.963	9.3	-23.4
223	4049	0.888	34.729	2378.	2252.	* 2276	* 416.5	25.4	2127.6	99.8	8.113	* 24.8	2136.1	91.9	11.164	7.952	0.936	4.8	-29.5
224	4221	0.298	34.681	2381.	2261.	* 2297	* 425.4	26.5	2138.6	95.8	8.104	* 25.8	2147.4	88.6	11.629	7.934	0.908	-2.1	-36.5

51

50

GEOSCEAS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 59 1 20 11 72 0335 30 12.5 S 39 18.0 W 4826
 59 4 20 11 72 1635 30 10.5 S 39 23.8 W 4916
 59 7 20 11 72 2329 30 12.8 S 39 24.0 W 4927

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS				*CALC PARAMETERS P=1ATH.T=INSITU*							CALC PARAMETERS P.T=INSITU					DELTA	DELTA					
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/00)	TALK (EQ/KG)	TIT (M/KG)	GC (M/KG)	TC02 (E-6)	TC02 (E-6)	PC02 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AM (E-9)	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)	
481	8	21.830	36.251	2385.	2848.	*	2833	*	306.4	9.6	1788.4	242.8	8.285	*	9.6	1788.4	242.8	5.192	8.285	2.571	196.7	178.3
482	64	19.853	36.269	2385.	2847.	*	2833	*	301.8	9.7	1800.6	236.6	8.288	*	9.7	1800.8	236.5	5.173	8.286	2.514	198.8	178.3
483	108	17.540	35.864	2364.	2834.	*	2859	*	274.4	9.5	1794.7	229.8	8.314	*	9.5	1795.8	229.5	4.694	8.318	2.413	183.4	162.8
484	150	16.350	35.742	2355.	2859.	*	2859	*	302.3	10.0	1841.4	286.7	8.276	*	10.0	1841.8	286.4	5.362	8.271	2.162	159.9	139.1
485	212	15.224	35.566	2348.	2870.	*	2187	*	311.3	11.5	1853.9	194.5	8.262	*	11.5	1864.5	194.8	5.559	8.255	2.823	147.1	126.1
486	262	14.801	35.547	2346.	2875.	*	2859	*	315.7	11.9	1873.4	189.7	8.256	*	11.8	1874.1	189.1	5.664	8.247	1.978	141.8	120.7
487	339	13.943	35.424	2339.	2883.	*	2892	*	325.6	12.6	1898.8	179.6	8.242	*	12.5	1891.7	178.8	5.888	8.238	1.857	138.9	189.7
488	487	12.954	35.288	2334.	2893.	*	2117	*	335.1	13.3	1918.8	169.7	8.228	*	13.3	1911.8	168.8	6.112	8.214	1.745	128.3	98.9
489	467	11.844	35.185	2326.	2181.	*	2138	*	344.6	14.2	1927.7	159.8	8.214	*	14.1	1928.8	158.8	6.348	8.197	1.628	189.1	87.4
410	527	10.535	34.988	2314.	2111.	*	2148	*	362.9	15.7	1958.8	144.5	8.198	*	15.5	1952.8	143.5	6.792	8.171	1.468	94.8	72.2
411	517	8.337	34.637	2385.	2120.	*	2168	*	381.6	17.7	1982.3	128.8	8.163	*	17.6	1983.6	126.8	7.243	8.148	1.288	76.4	54.3
412	685	6.849	34.467	2297.	2144.	*	2172	*	413.2	20.2	2018.4	113.4	8.126	*	20.0	2011.8	112.1	7.933	8.181	1.133	61.1	38.8
415	797	5.238	34.328	2298.	2152.	*	2164	*	484.6	21.8	2022.0	89.8	8.129	*	20.8	2023.6	187.6	7.963	8.899	1.083	55.5	32.9
416	867	4.622	34.255	2296.	2157.	*	2175	*	412.4	21.9	2038.3	104.8	8.128	*	21.6	2032.1	183.3	8.288	8.886	1.838	58.6	27.7
417	942	3.972	34.276	2387.	2164.	*	2194	*	394.4	21.4	2035.4	187.2	8.136	*	21.1	2037.3	185.5	7.941	8.188	1.868	52.2	29.8
418	1817	3.572	34.385	2385.	2177.	*	2213	*	429.7	23.7	2054.6	98.7	8.181	*	23.4	2056.7	97.8	8.688	8.862	0.975	42.9	19.6
419	1894	3.279	34.345	2315.	2189.	*	2226	*	453.7	24.2	2067.1	97.7	8.898	*	23.8	2069.3	95.9	8.886	8.855	0.965	41.2	17.6
420	1167	3.148	34.384	2320.	2198.	*	2232	*	445.8	25.0	2077.3	95.7	8.887	*	24.6	2079.7	93.7	9.887	8.842	0.945	38.4	14.6
421	1241	3.885	34.434	2324.	2289.	*	2252	*	467.7	26.3	2098.7	92.0	8.868	*	25.9	2093.2	89.9	9.558	8.828	0.988	33.9	9.9
422	1316	2.897	34.488	2330.	2223.	*	2247	*	495.8	28.8	2107.1	87.9	8.846	*	27.5	2109.7	85.8	18.145	7.994	0.867	29.1	4.9
423	1398	2.846	34.535	2333.	2238.	*	2248	*	584.3	28.5	2114.5	86.9	8.839	*	28.8	2117.3	84.7	18.363	7.985	0.858	27.4	2.9
181	1488	2.887	34.603	2330.	2225.	*	2252	*	477.1	27.8	2106.0	91.2	8.861	*	26.5	2109.8	88.7	9.934	8.883	0.988	38.5	5.8
424	1489	2.816	34.618	2336.	2219.	*	2252	*	463.4	26.2	2099.5	93.2	8.873	*	25.7	2102.5	98.8	9.888	8.814	0.921	32.5	7.8
182	1638	2.815	34.678	2335.	2222.	*	2223	*	477.3	27.8	2183.9	91.1	8.861	*	25.4	2187.2	88.4	18.883	7.996	0.899	28.9	3.8
183	1778	2.852	34.744	2344.	2289.	*	2248	*	413.6	33.4	2082.4	183.2	8.118	*	22.8	2086.2	188.8	8.936	8.849	1.819	39.1	13.6
184	1934	2.985	34.810	2342.	2285.	*	2252	*	489.8	33.8	2077.8	184.2	8.122	*	22.4	2081.8	188.8	8.977	8.847	1.828	38.4	12.4
185	2080	2.949	34.851	2341.	2198.	*	2192	*	394.8	22.2	2068.3	187.5	8.137	*	21.5	2072.7	183.8	8.797	8.856	1.868	48.8	13.5
186	2238	2.952	34.885	2342.	2188.	*	2212	*	349.3	19.6	2042.0	118.4	8.183	*	19.8	2046.9	114.1	7.998	8.897	1.166	48.8	21.9
187	2378	3.017	34.918	2331.	2176.	*	2188	*	363.6	20.4	2041.5	114.1	8.166	*	19.7	2046.7	109.6	8.437	8.874	1.121	42.8	15.4
188	2527	2.936	34.917	2348.	2188.	*	2175	*	353.1	19.9	2043.8	117.1	8.179	*	19.1	2048.6	112.2	8.384	8.881	1.149	43.9	16.1
189	2678	2.845	34.914	2348.	2178.	*	2288	*	347.5	19.6	2048.1	118.3	8.185	*	18.9	2046.1	113.1	8.385	8.881	1.157	43.8	14.7
110	2827	2.793	34.916	2338.	2177.	*	2191	*	348.5	19.7	2039.7	117.6	8.183	*	18.9	2045.9	112.2	8.452	8.873	1.148	48.4	11.7
111	2972	2.694	34.911	2348.	2183.	*	2196	*	357.8	20.3	2047.3	115.5	8.173	*	19.4	2053.8	109.8	8.753	8.858	1.123	36.4	7.1
112	3121	2.573	34.984	2345.	2175.	*	2198	*	328.3	18.7	2033.3	123.8	8.206	*	17.9	2048.4	116.8	8.219	8.885	1.195	41.6	11.8
115	3281	2.419	34.897	2349.	2188.	*	2191	*	348.3	19.9	2058.2	117.9	8.186	*	18.9	2057.5	111.5	8.749	8.858	1.141	34.4	4.1
116	3428	2.193	34.878	2348.	2187.	*	2211	*	342.7	19.8	2049.3	117.9	8.189	*	18.9	2057.8	111.2	8.884	8.855	1.136	32.2	1.3
117	3572	1.867	34.837	2359.	2218.	*	2234	*	387.7	21.5	2077.3	111.2	8.163	*	20.5	2085.1	104.5	9.496	8.822	1.867	23.5	-8.8
118	3819	1.485	34.799	2361.	2224.	*	2252	*	392.3	23.3	2096.2	104.5	8.136	*	22.1	2184.3	97.6	18.338	7.986	0.996	13.2	-19.3
119	3966	0.984	34.734	2372.	2258.	*	2278	*	428.9	26.8	2127.4	96.6	8.182	*	24.6	2153.6	89.8	11.388	7.944	0.914	3.1	-38.8
128	4113	0.478	34.691	2374.	2265.	*	2287	*	461.1	28.5	2146.7	89.8	8.872	*	27.8	2155.1	83.8	12.412	7.986	0.844	-6.8	-39.9
121	4268	0.255	34.678	2376.	2271.	*	2287	*	478.8	29.4	2154.0	87.7	8.863	*	27.7	2162.9	88.7	12.853	7.891	0.821	-10.5	-45.8
122	4588	0.175	34.678	2378.	2271.	*	2282	*	458.8	28.2	2147.9	98.9	8.888	*	26.5	2157.8	83.4	12.629	7.899	0.848	-11.6	-47.1
123	4638	0.185	34.671	2379.	2268.	*	2285	*	451.1	28.2	2148.8	91.8	8.888	*	26.5	2158.3	83.2	12.812	7.892	0.846	-14.1	-58.2
124	4883	0.198	34.673	2376.	2265.	*	2285	*	458.8	28.2	2145.9	98.9	8.888	*	26.4	2155.6	82.9	12.995	7.886	0.843	-16.6	-53.3

GEOSECS PLANTIC STATION CAST DATE LATITUDE LONGITUDE BOT DEPTH
 58 1 16 11 7 0.0 S 37 1.4 W 4392
 58 5 17 11 72 2143 27 0.0 S 37 0.8 W
 58 9 18 11 72 3711 27 0.0 S 37 1.8 W

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG)	TIT (M/KG)	GC TC02 (E-6)	CALC PARAMETERS P=10M, T=15M, U=				CALC PARAMETERS P, T=15M, U=				ICP (M/KG)	DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)		
							PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)				AM (E-9)	PM (E-9)
981	13	21.926	36.486	2489.	2844.	* 2863	* 387.1	9.4	1784.6	258.8	8.288	* 9.4	1784.6	258.8	5.162	8.287	2.668	284.8	184.4
982	58	28.819	36.583	2411.	2837.	* 2866	* 381.7	9.5	1799.2	248.3	8.292	* 9.5	1799.4	248.1	5.125	8.298	2.661	282.6	182.2
984	118	17.358	35.898	2369.	2861.	* 2895	* 383.7	18.6	1834.8	215.6	8.278	* 18.3	1833.1	215.3	5.318	8.274	2.266	169.1	148.5
985	158	16.241	35.715	2362.	2874.	* 2184	* 314.7	11.3	1868.8	281.9	8.263	* 11.3	1861.2	281.5	5.531	8.257	2.118	155.8	134.2
987	237	14.858	35.541	2353.	2873.	* 2183	* 384.3	11.4	1865.9	195.7	8.271	* 11.4	1866.5	195.2	5.466	8.262	2.833	148.8	127.8
918	377	12.367	35.159	2334.	2186.	* 2128	* 349.1	14.2	1938.5	161.3	8.212	* 14.1	1931.4	168.5	6.331	8.199	1.654	112.2	98.8
912	466	18.544	34.938	2321.	2125.	* 2141	* 381.1	16.4	1967.9	148.6	8.172	* 16.3	1969.8	139.7	6.994	8.155	1.431	98.6	69.8
915	527	9.821	34.715	2313.	2128.	* 2165	* 376.9	17.1	1977.7	133.2	8.171	* 17.0	1978.8	132.2	7.855	8.152	1.349	82.5	68.7
917	667	6.352	34.488	2304.	2154.	* 2185	* 415.1	28.7	2821.6	111.7	8.124	* 28.5	2823.8	118.5	7.964	8.899	1.116	59.6	37.3
919	885	4.538	34.328	2313.	2173.	* 2283	* 413.9	22.8	2843.1	185.9	8.128	* 21.8	2848.8	184.5	8.137	8.898	1.851	52.3	29.5
928	874	4.835	34.334	2312.	2282.	* 2289	* 499.1	27.1	2885.7	89.2	8.045	* 26.7	2887.4	87.8	9.753	8.811	0.884	35.8	12.1
921	945	3.752	34.352	2315.	2189.	* 2223	* 442.4	24.2	2866.8	97.9	8.092	* 23.9	2868.8	96.3	8.818	8.855	0.978	42.9	19.8
922	1815	3.451	34.377	2321.	2287.	* 2223	* 477.9	26.5	2888.8	91.5	8.061	* 26.1	2891.8	85.5	5.518	8.821	0.986	35.8	12.5
881	1188	3.149	34.588	2336.	2218.	* 2255	* 465.8	26.8	2898.1	93.9	8.873	* 25.6	2188.5	91.9	9.489	8.826	0.938	36.4	12.6
882	1336	2.958	34.595	2339.	2233.	* 2249	* 585.2	28.4	2117.1	87.5	8.848	* 27.9	2115.7	85.4	18.259	7.987	0.866	28.5	4.3
683	1461	3.186	34.714	2348.	2213.	* 2221	* 439.4	24.6	2889.7	98.7	8.895	* 24.1	2892.7	96.2	9.163	8.838	0.979	38.3	13.7
684	1632	3.234	34.818	2338.	2194.	* 2211	* 394.3	21.9	2864.8	188.1	8.137	* 21.4	2867.5	185.1	8.439	8.874	1.873	45.6	28.6
685	1786	3.374	34.885	2339.	2179.	* 2285	* 358.7	19.9	2841.9	117.2	8.174	* 15.3	2845.9	113.8	7.849	8.185	1.164	52.9	27.4
686	1934	3.563	34.922	2332.	2177.	* 2177	* 368.7	28.4	2842.5	114.1	8.162	* 15.8	2846.7	118.5	8.178	8.887	1.131	48.2	22.3
687	2885	3.242	34.925	2335.	2175.	* 2197	* 348.2	15.4	2836.2	115.4	8.185	* 18.8	2848.8	115.4	7.864	8.184	1.181	51.6	25.2
688	2235	3.165	34.938	2334.	2173.	* 2193	* 352.8	19.7	2835.7	117.6	8.179	* 15.8	2848.7	113.3	8.887	8.892	1.168	48.8	21.2
689	2389	3.898	34.935	2338.	2171.	* 2181	* 339.9	19.8	2838.8	121.2	8.193	* 18.3	2836.2	116.5	7.923	8.181	1.193	49.6	22.2
618	2561	2.983	34.929	2348.	2173.	* 2282	* 338.4	19.8	2832.9	121.1	8.195	* 18.3	2838.7	116.1	8.815	8.896	1.188	47.3	19.4
611	2736	2.854	34.917	2341.	2178.	* 2193	* 345.7	19.5	2839.6	118.9	8.187	* 18.7	2845.7	113.5	8.386	8.881	1.162	42.9	14.4
612	2912	2.785	34.928	2343.	2174.	* 2188	* 332.9	18.8	2832.7	122.5	8.281	* 18.8	2839.3	116.7	8.158	8.888	1.194	44.8	15.8
615	3897	2.671	34.911	2343.	2171.	* 2285	* 325.1	18.5	2828.4	124.1	8.218	* 17.6	2835.4	117.9	8.129	8.898	1.287	43.1	13.4
616	3273	2.529	34.988	2347.	2191.	* 2198	* 358.3	28.5	2855.6	115.8	8.173	* 19.5	2862.8	188.7	9.811	8.845	1.112	31.7	1.4
617	3445	2.298	34.879	2354.	2186.	* 2283	* 338.8	15.1	2844.8	122.1	8.284	* 18.1	2852.6	115.2	8.514	8.878	1.178	36.1	5.1
618	3615	1.815	34.838	2359.	2218.	* 2228	* 386.9	22.7	2888.6	186.7	8.143	* 21.6	2896.3	188.1	9.994	8.888	1.822	18.5	-13.1
619	3798	1.482	34.785	2367.	2224.	* 2239	* 378.1	22.5	2893.3	188.2	8.152	* 21.4	2181.5	181.1	5.968	8.882	1.831	17.8	-15.4
628	3943	1.891	34.749	2373.	2244.	* 2265	* 411.2	24.8	2118.7	188.5	8.119	* 23.5	2127.8	93.5	18.911	7.962	0.953	7.3	-25.8
621	4897	8.717	34.714	2377.	2251.	* 2281	* 414.4	25.4	2126.7	98.9	8.115	* 24.8	2135.3	91.7	11.177	7.952	0.934	3.1	-38.6
622	4248	8.274	34.677	2381.	2263.	* 2263	* 431.5	26.9	2141.4	94.7	8.098	* 25.4	2158.2	87.5	11.889	7.928	0.889	-3.6	-38.8
623	4422	8.224	34.673	2381.	2268.	* 2291	* 421.9	26.3	2137.3	96.4	8.187	* 24.8	2146.5	88.7	11.768	7.938	0.982	-5.8	-48.1
624	4578	8.217	34.672	2378.	2264.	* 2292	* 442.1	27.6	2143.8	92.6	8.888	* 25.9	2153.2	84.8	12.488	7.984	0.862	-11.2	-47.8

GEOSYCS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE SBT DEPTH
 68 1 22 11 72 1510 32 58.8 S 42 38.5 W 4425
 68 4 22 11 72 2150 32 57.8 S 42 31.8 W
 68 8 23 11 72 0810 32 57.8 S 42 28.8 W 4416

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG)	MEASURED PARAMETERS				CALC PARAMETERS P-T=INSITU				CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)	
					TIT (M/KG)	TCO2 (M/KG)	GC (M/KG)	PCO2 (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH			ICP (E-6)
481	2	18.497	35.998	2382.	2845.	* 2851	* 282.8	9.5	1880.1	233.4	8.389	* 9.5	1880.1	233.4	4.911	8.389	2.483	198.8	169.6
482	22	18.486	35.983	2373.	2848.	* 2849	* 281.8	9.5	1798.7	233.8	8.388	* 9.5	1796.8	233.8	4.931	8.387	2.468	188.2	167.8
483	65	17.588	36.885	2377.	2847.	* 2886	* 278.8	9.6	1887.4	238.8	8.318	* 9.6	1887.6	229.8	4.922	8.388	2.423	184.8	163.4
484	95	16.888	35.912	2378.	2835.	* 2879	* 287.7	10.1	1823.1	219.7	8.298	* 18.1	1825.4	219.5	5.898	8.293	2.311	173.4	152.8
485	117	16.663	35.898	2378.	2861.	* 2889	* 293.8	18.4	1834.9	215.7	8.298	* 18.4	1835.3	215.4	5.178	8.288	2.266	169.2	148.3
486	128	16.658	35.89	2367.	2863.	* 2877	* 299.4	18.6	1848.8	212.4	8.282	* 18.6	1848.3	212.1	5.281	8.277	2.231	165.8	145.1
487	188	15.838	35.716	2388.	2876.	* 2889	* 314.8	11.5	1865.6	199.8	8.281	* 11.4	1868.8	198.6	5.532	8.258	2.879	152.8	131.1
488	193	15.488	35.671	2356.	2882.	* 2892	* 324.4	11.9	1877.8	192.3	8.249	* 11.9	1878.3	191.8	5.723	8.242	2.886	145.8	124.1
489	244	15.818	35.631	2356.	2878.	* 2892	* 299.2	11.2	1859.1	199.7	8.277	* 11.1	1859.7	199.1	5.388	8.289	2.888	152.8	131.8
418	281	14.593	35.564	2349.	2886.	* 2899	* 326.9	12.4	1889.1	184.8	8.243	* 12.3	1889.8	183.9	5.842	8.233	1.917	138.5	115.4
411	353	13.541	35.379	2348.	2887.	* 2899	* 325.1	12.7	1896.7	177.6	8.242	* 12.8	1897.5	178.8	5.899	8.229	1.834	128.8	187.5
412	433	12.187	35.147	2329.	2185.	* 2122	* 352.7	14.4	1932.8	158.8	8.287	* 14.3	1933.8	157.7	8.437	8.191	1.623	109.8	87.5
415	533	9.436	34.733	2314.	2118.	* 2143	* 359.9	18.1	1961.9	148.8	8.198	* 18.8	1963.1	139.8	8.758	8.178	1.416	89.3	67.4
416	628	7.898	34.467	2299.	2132.	* 2149	* 382.2	18.6	1931.8	121.8	8.158	* 18.4	1933.2	128.4	7.344	8.134	1.217	69.9	47.7
417	729	5.358	34.382	2296.	2136.	* 2163	* 378.3	19.1	1999.8	117.8	8.184	* 18.9	2001.4	115.7	7.311	8.138	1.163	64.2	41.7
418	828	4.683	34.263	2388.	2152.	* 2172	* 389.2	28.7	2821.3	118.1	8.143	* 28.4	2823.8	188.6	7.745	8.111	1.898	56.2	33.4
419	928	4.826	34.272	2384.	2165.	* 2174	* 485.2	22.8	2858.1	184.9	8.128	* 21.7	2848.8	183.3	8.133	8.898	1.838	58.1	27.8
428	1636	3.497	34.271	2318.	2187.	* 2203	* 444.5	24.6	2866.3	96.1	8.888	* 24.2	2868.4	94.4	8.933	8.848	8.948	48.2	16.7
421	1146	3.859	34.389	2313.	2281.	* 2218	* 473.7	28.6	2884.3	98.1	8.862	* 28.2	2886.5	88.3	9.615	8.817	8.888	33.1	9.4
422	1261	3.948	34.378	2325.	2213.	* 2218	* 476.5	28.9	2895.7	98.5	8.861	* 28.4	2898.2	88.4	9.739	8.811	8.891	32.2	8.2
423	1374	2.813	34.431	2332.	2225.	* 2245	* 494.4	28.8	2189.8	88.8	8.847	* 27.5	2111.7	85.8	10.167	7.993	8.885	28.5	4.2
424	1483	2.793	34.518	2347.	2228.	* 2252	* 459.8	26.8	2187.3	94.7	8.878	* 25.5	2118.3	92.2	9.543	8.828	8.933	34.8	9.3
182	1576	2.823	34.574	2343.	2227.	* 2259	* 468.4	28.5	2187.8	92.9	8.878	* 25.9	2118.8	98.3	9.821	8.888	8.915	31.2	6.3
183	1723	2.851	34.659	2358.	2224.	* 2237	* 448.6	24.9	2188.6	98.5	8.895	* 24.3	2184.2	95.5	9.387	8.827	8.978	35.1	9.7
184	1873	3.088	34.743	2353.	2216.	* 2237	* 438.8	24.2	2891.3	188.5	8.183	* 23.6	2895.2	97.2	9.338	8.838	8.998	35.5	9.7
185	2671	3.141	34.833	2345.	2194.	* 2223	* 377.7	21.1	2888.7	112.2	8.155	* 28.5	2865.2	188.4	8.428	8.074	1.187	44.7	18.3
186	2278	3.286	34.898	2338.	2178.	* 2262	* 358.4	19.8	2841.8	117.2	8.176	* 19.2	2846.8	112.8	8.186	8.888	1.154	47.2	28.2
187	2464	3.218	34.919	2337.	2178.	* 2193	* 341.2	19.8	2829.8	121.2	8.192	* 18.3	2835.3	118.4	7.997	8.897	1.191	48.7	21.2
188	2666	3.185	34.938	2338.	2176.	* 2198	* 354.5	19.8	2839.2	117.8	8.177	* 19.1	2843.1	111.9	8.438	8.874	1.146	42.1	13.9
189	2867	2.928	34.918	2337.	2184.	* 2191	* 388.7	28.7	2898.2	113.1	8.181	* 19.9	2856.4	187.7	8.915	8.858	1.182	35.6	6.7
118	3888	2.785	34.988	2345.	2183.	* 2191	* 347.6	19.7	2844.9	118.4	8.183	* 18.8	2851.7	112.4	8.592	8.866	1.151	38.8	8.4
111	3212	2.689	34.898	2345.	2181.	* 2288	* 341.8	19.4	2842.1	119.5	8.192	* 18.5	2849.3	113.2	8.578	8.867	1.158	37.8	6.9
112	3311	2.466	34.883	2358.	2187.	* 2281	* 342.8	19.6	2848.3	119.1	8.198	* 18.7	2855.7	112.6	8.679	8.862	1.152	35.2	4.7
115	3419	2.888	34.829	2354.	2215.	* 2197	* 394.7	22.9	2886.5	185.5	8.135	* 21.8	2893.8	99.3	9.983	8.881	1.814	28.4	-18.5
813	3522	1.789	34.814	2359.	2213.	* 2231	* 373.8	22.8	2881.5	189.6	8.156	* 28.9	2889.1	183.8	9.682	8.818	1.851	22.6	-8.7
118	3625	1.394	34.769	2364.	2238.	* 2261	* 422.1	25.2	2114.2	98.6	8.188	* 23.9	2121.7	92.3	18.858	7.964	8.941	18.4	-21.4
117	3725	1.891	34.739	2373.	2241.	* 2258	* 482.8	24.3	2114.5	182.1	8.127	* 23.1	2122.4	95.5	18.491	7.979	8.972	12.1	-28.1
118	3824	8.752	34.711	2374.	2258.	* 2272	* 443.8	27.1	2137.4	93.5	8.888	* 25.8	2143.2	87.8	11.628	7.933	8.885	2.1	-38.5
119	3927	8.458	34.694	2373.	2254.	* 2288	* 429.8	26.6	2132.3	95.1	8.899	* 25.2	2148.4	88.4	11.434	7.942	8.899	2.8	-31.2
128	4816	6.383	34.678	2376.	2254.	* 2277	* 418.7	28.1	2131.2	96.7	8.185	* 24.7	2139.6	89.8	11.237	7.949	8.912	2.8	-31.5
121	4125	6.177	34.672	2381.	2257.	* 2295	* 412.7	25.8	2133.2	98.8	8.115	* 24.4	2141.8	98.8	11.215	7.958	8.923	1.4	-32.6
122	4223	8.128	34.678	2379.	2267.	* 2278	* 446.9	28.8	2147.5	91.5	8.883	* 26.5	2156.1	84.4	12.284	7.913	8.858	-6.4	-48.8
123	4324	8.897	34.668	2378.	2271.	* 2288	* 462.4	29.8	2153.1	88.9	8.878	* 27.4	2181.9	81.8	12.738	7.955	8.831	-18.5	-45.3
124	4414	6.187	34.667	2388.	2264.	* 2287	* 434.2	27.2	2143.2	93.8	8.895	* 25.6	2152.3	96.1	12.892	7.918	8.875	-7.5	-42.7

GEOSECS ATLANTIC STATION CASI DATE TIME LATITUDE LONGITUDE BOT DEPTH
 61 1 24 11 72 1622 36 8.8 S 43 8.8 W 4943
 61 5 23 11 72 0412 36 8.4 S 44 59.8 W
 61 8 25 11 72 1415 36 1.8 S 44 59.4 W 4934

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS										CALC PARAMETERS P=1ATM,T=INSITU										CALC PARAMETERS P,T=INSITU			
SAMP NO	DEPTH (M)	TEMP (C)	SAL (E-6)	TALK (E-6)	TIT (M/KG)	GC TC02 (M/KG)	GC TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)			
581	9	18.6	35.825	2365	2848	* 2832	* 293.8	9.9	1882.8	227.3	8.293	* 9.9	1882.8	227.3	5.098	8.293	2.387	181.9	161.5				
582	51	17.389	35.931	2378	2842	* 2841	* 277.8	9.6	1883.9	228.5	8.311	* 9.6	1884.8	229.3	4.986	8.309	2.483	182.6	162.8				
583	86	16.111	35.793	2362	2837	* 2885	* 288.7	10.4	1834.8	212.6	8.293	* 10.4	1834.2	212.4	5.138	8.298	2.228	166.3	145.7				
584	148	15.181	35.641	2352	2875	* 2875	* 313.8	11.6	1869.5	193.8	8.268	* 11.6	1869.9	193.5	5.553	8.253	2.822	147.8	126.1				
585	188	14.926	35.628	2351	2867	* 2868	* 299.5	11.2	1857.7	198.1	8.276	* 11.2	1858.1	197.7	5.379	8.269	2.865	158.9	138.8				
586	224	14.897	35.661	2354	2866	* 2869	* 294.5	11.8	1854.2	208.8	8.282	* 11.8	1854.8	208.3	5.318	8.274	2.893	153.2	132.2				
587	268	14.797	35.646	2354	2866	* 2882	* 294.2	11.8	1854.9	208.8	8.282	* 11.8	1855.6	199.4	5.336	8.273	2.884	152.1	131.8				
588	317	14.324	35.548	2363	2879	* 2881	* 292.8	11.1	1868.1	199.7	8.296	* 11.1	1868.9	199.8	5.311	8.275	2.873	151.3	138.1				
589	363	13.362	35.328	2333	2881	* 2899	* 322.1	12.7	1891.6	176.8	8.243	* 12.6	1892.5	178.8	5.888	8.231	1.822	127.8	186.5				
590	426	12.183	35.148	2327	2887	* 2898	* 321.6	13.2	1905.4	168.4	8.248	* 13.1	1906.4	167.5	5.953	8.225	1.725	118.8	97.3				
591	485	12.178	35.242	2329	2883	* 2888	* 313.9	12.8	1898.8	172.2	8.249	* 12.7	1899.2	171.1	5.859	8.232	1.767	122.8	188.4				
592	535	11.689	35.134	2328	2892	* 2886	* 322.2	13.4	1912.8	165.8	8.238	* 13.3	1914.1	164.6	6.836	8.219	1.695	115.1	93.4				
593	596	9.298	34.728	2387	2186	* 2128	* 345.3	15.5	1947.6	142.8	8.284	* 15.4	1949.8	141.6	6.576	8.182	1.441	91.5	89.5				
594	647	7.871	34.433	2296	2114	* 2119	* 346.9	16.9	1966.8	138.4	8.194	* 16.7	1968.2	129.1	6.761	8.178	1.383	78.4	56.2				
595	692	6.264	34.336	2298	2125	* 2135	* 378.7	18.5	1986.4	128.8	8.165	* 18.4	1987.9	118.8	7.237	8.139	1.193	67.6	45.2				
596	746	5.237	34.246	2287	2125	* 2132	* 368.8	18.7	1988.3	117.9	8.172	* 18.5	1989.9	116.5	7.183	8.144	1.178	64.9	42.3				
597	792	4.953	34.248	2289	2133	* 2131	* 371.2	19.5	1999.1	114.4	8.168	* 19.2	2000.8	112.9	7.418	8.138	1.134	68.9	38.2				
598	847	4.715	34.254	2294	2145	* 2157	* 386.8	20.4	2014.2	118.4	8.145	* 20.2	2016.8	108.9	7.718	8.113	1.093	56.4	33.5				
599	894	4.382	34.232	2298	2142	* 2161	* 392.3	20.5	2011.9	109.7	8.147	* 20.2	2013.7	108.1	7.718	8.113	1.084	55.1	32.1				
600	996	3.852	34.224	2296	2153	* 2178	* 389.1	21.2	2024.8	106.9	8.148	* 20.9	2026.9	105.2	7.923	8.181	1.055	51.3	28.1				
601	1145	3.436	34.265	2383	2172	* 2191	* 417.9	23.2	2048.5	108.4	8.111	* 22.8	2050.8	98.4	8.578	8.867	0.988	43.3	19.5				
602	1307	2.918	34.325	2315	2197	* 2283	* 452.5	25.6	2078.8	93.4	8.088	* 25.1	2080.6	91.3	9.364	8.829	0.918	34.7	18.5				
603	181	1386	2.773	34.364	2325	2213	* 2286	473.2	26.9	2095.7	98.4	8.863	* 26.4	2098.5	88.2	9.883	8.889	0.888	38.8	6.4			
604	1533	2.668	34.457	2335	2227	* 2256	* 489.4	27.9	2118.6	88.5	8.851	* 27.3	2113.6	86.1	10.225	7.998	0.869	27.4	2.6				
605	1888	2.829	34.655	2345	2235	* 2252	* 498.5	27.7	2117.5	89.7	8.852	* 27.1	2121.2	86.7	10.519	7.978	0.881	24.9	-8.9				
606	2028	2.874	34.728	2344	2222	* 2252	* 452.4	25.5	2108.4	96.1	8.883	* 24.8	2104.5	92.7	9.914	8.884	0.944	29.4	3.1				
607	2346	3.813	34.844	2343	2289	* 2283	* 419.8	23.6	2082.9	102.6	8.113	* 22.8	2087.8	98.5	9.538	8.821	1.086	32.8	4.8				
608	2584	2.936	34.858	2344	2191	* 2221	* 369.9	28.8	2056.9	113.3	8.162	* 28.1	2062.4	108.6	8.623	8.864	1.189	48.4	12.7				
609	2981	2.652	34.886	2342	2189	* 2212	* 365.7	28.8	2055.8	113.2	8.165	* 19.9	2061.5	107.8	8.346	8.848	1.188	34.1	4.8				
610	3185	2.114	34.812	2359	2225	* 2252	* 469.9	23.8	2036.3	102.9	8.121	* 22.7	2105.8	97.3	10.873	7.997	0.993	21.4	-8.6				
611	3352	1.694	34.774	2362	2236	* 2265	* 426.2	25.1	2112.3	98.6	8.185	* 24.8	2119.3	92.7	10.664	7.972	0.945	14.3	-16.5				
612	3545	1.363	34.748	2369	2242	* 2274	* 419.7	25.1	2117.6	99.3	8.111	* 23.9	2125.1	93.1	10.783	7.971	0.948	12.2	-19.3				
613	3912	8.637	34.698	2371	2255	* 2287	* 441.8	27.1	2134.5	93.4	8.889	* 25.7	2142.5	86.8	11.688	7.932	0.883	8.7	-32.3				
614	4696	8.448	34.683	2378	2258	* 2294	* 433.8	26.9	2138.4	94.7	8.896	* 25.4	2146.9	87.7	11.691	7.932	0.892	-1.1	-34.9				
615	4279	8.382	34.676	2377	2262	* 2298	* 439.8	27.4	2141.6	93.8	8.898	* 25.8	2158.4	85.9	12.871	7.918	0.872	-5.7	-48.3				
616	4463	8.286	34.671	2378	2267	* 2298	* 451.4	28.2	2147.8	91.8	8.888	* 26.6	2156.9	83.5	12.591	7.988	0.849	-10.8	-46.1				
617	4825	8.152	34.666	2377	2272	* 2298	* 469.7	29.4	2154.8	97.8	8.863	* 27.5	2164.5	79.9	13.536	7.968	0.812	-20.8	-56.8				
618	4924	8.157	34.666	2394	2259	* 2288	* 418.2	25.7	2134.7	98.6	8.118	* 24.8	2145.1	99.9	11.998	7.921	0.914	-11.6	-48.8				

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 58 1 13 12 72 0321 48 39.0 S 45 59.2 W 5970
 58 5 13 12 72 1809 48 41.5 S 46 0.5 W
 58 7 14 12 72 0246 48 43.0 S 45 57.3 W 5987

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO.	DEPTH (M)	TEMP. (C)	SAL. (8/88)	MEASURED PARAMETERS			*CALC PARAMETERS P=1ATM.T=INSITU*							CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)	
				TALK (EQ/KG) (E-6)	TTCO2 (M/KG) (E-6)	*GC (M/KG) (E-6)	*TCO2 (M/KG) (E-6)	*PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	*H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AM (E-9)	PH			ICP (E-6)
102	1534	2.433	34.694	2355.	2245.	* 2265	* 2265	* 486.9	27.9	2127.1	89.9	0.854	* 27.4	2130.2	87.4	10.141	7.954	0.889	20.7	3.9
101	1534	2.433	34.697	2352.	2233.	* 2271	* 2271	* 455.9	26.2	2112.2	94.6	0.880	* 25.6	2115.4	92.0	9.550	0.820	0.936	33.3	0.4
103	1741	2.389	34.732	2347.	2241.	* 2264	* 2264	* 498.3	28.6	2124.7	87.6	0.844	* 28.8	2120.2	84.9	10.688	7.975	0.864	24.2	-1.3
104	1932	2.346	34.751	2357.	2227.	* 2256	* 2256	* 423.5	24.4	2181.9	100.7	0.109	* 23.7	2186.8	97.3	9.250	0.834	0.992	34.0	0.0
105	2136	2.296	34.783	2353.	2237.	*	*	* 465.0	26.0	2117.1	93.0	0.871	* 26.0	2121.5	89.5	10.299	7.987	0.913	25.0	-1.7
106	2136	2.296	34.784	2355.	2225.	* 2281	* 2281	* 422.5	24.4	2100.0	100.6	0.110	* 23.6	2104.5	96.9	9.425	0.826	0.980	32.4	5.7
100	2480	1.942	34.769	2359.	2230.	* 2290	* 2290	* 420.1	24.5	2105.4	100.1	0.111	* 23.7	2110.6	95.7	9.700	0.813	0.975	27.4	-0.4
109	2691	1.732	34.755	2360.	2250.	* 2249	* 2249	* 476.4	20.1	2132.0	90.0	0.061	* 27.1	2137.4	85.6	11.110	7.954	0.872	15.0	-13.5
112	3307	1.029	34.713	2367.	2235.	* 2292	* 2292	* 400.0	24.2	2100.0	102.0	0.120	* 23.1	2116.0	95.9	10.135	7.994	0.976	16.9	-14.1
119	4595	0.273	34.672	2372.	2266.	* 2280	* 2280	* 466.7	29.1	2148.0	80.1	0.066	* 27.4	2150.0	80.6	13.174	7.880	0.820	-15.6	-51.4
120	4891	0.237	34.670	2370.	2257.	* 2292	* 2292	* 443.0	27.7	2137.6	91.0	0.086	* 25.9	2147.5	93.6	12.916	7.889	0.849	-17.3	-54.4
123	5793	0.256	34.665	2369.	2265.	* 2287	* 2287	* 472.1	29.4	2148.5	87.0	0.060	* 27.3	2160.0	77.6	14.927	7.926	0.789	-30.0	-79.9

GEODESIC ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 67 1 9 12 72 2150 44 58.8 S 31 3.5 W 5813
 57 4 10 12 72 2027 44 59.5 S 31 5.0 W
 57 7 10 12 72 1010 44 58.9 S 31 0.6 W 5824

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS				CALC PARAMETERS P=10M,T=INSITU								CALC PARAMETERS P,T=INSITU				DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (EO/KG)	TIT (M/KG)	GC TC02 (E-6)	TC02 (E-6)	PC02 (E-6)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	CO3= (M/KG)	CO3= (M/KG)	(ARRG) (E-6)
401	10	11.902	34.561	2297.	2039.	* 2057	* 277.0	11.5	1846.4	180.2	0.291	* 11.5	1846.4	180.1	5.120	0.291	1.825	134.3	113.6		
402	42	9.950	34.593	2297.	2013.	* 2059	* 220.3	10.8	1011.6	193.5	0.360	* 10.8	1011.7	193.4	4.381	0.350	1.901	147.2	120.4		
403	62	9.477	34.623	2298.	2063.	* 2080	* 207.0	12.9	1089.7	162.4	0.271	* 12.9	1089.9	162.3	5.383	0.269	1.647	113.9	95.1		
404	102	9.263	34.631	2297.	2063.	* 2105	* 206.5	12.9	1090.5	161.6	0.272	* 12.9	1090.7	161.4	5.391	0.268	1.630	114.7	93.0		
405	151	8.614	34.631	2294.	2092.	* 2113	* 329.4	15.2	1934.1	142.0	0.210	* 15.1	1934.4	142.5	6.130	0.212	1.446	95.5	74.4		
406	199	7.863	34.579	2294.	2000.	* 2116	* 311.7	14.7	1920.3	144.9	0.230	* 14.7	1920.8	144.5	5.903	0.229	1.465	97.1	76.0		
407	251	5.823	34.311	2277.	2120.	* 2150	* 370.0	19.3	1903.9	114.8	0.153	* 19.2	1906.5	114.3	7.179	0.144	1.150	66.5	45.1		
408	300	5.052	34.223	2203.	2120.	* 2153	* 373.2	19.5	1994.8	113.7	0.150	* 19.4	1995.4	113.2	7.140	0.146	1.135	64.9	43.4		
409	353	4.529	34.105	2279.	2122.	* 2153	* 359.3	19.1	1900.2	114.6	0.170	* 19.8	1909.0	114.8	6.974	0.156	1.142	63.3	43.7		
410	405	4.204	34.103	2202.	2122.	* 2163	* 330.1	10.0	1906.7	116.4	0.100	* 10.7	1907.6	115.7	6.853	0.104	1.159	66.6	44.8		
411	445	4.133	34.170	2203.	2143.	* 2163	* 397.0	21.5	2010.4	105.1	0.130	* 21.4	2019.3	104.3	7.709	0.113	1.040	54.9	33.0		
412	445	4.133	34.170	2204.	2130.	* 2150	* 301.9	20.6	2000.9	100.4	0.146	* 20.5	2009.9	107.6	7.434	0.129	1.070	50.2	36.4		
413	559	3.606	34.104	2294.	2156.	* 2172	* 424.1	23.3	2034.4	90.3	0.103	* 23.1	2035.6	97.3	8.207	0.092	0.975	47.0	24.0		
416	650	3.404	34.194	2294.	2150.	* 2107	* 399.9	22.2	2032.9	102.9	0.127	* 22.8	2034.3	101.7	7.917	0.101	1.020	50.6	20.2		
417	760	3.140	34.229	2296.	2103.	* 2204	* 466.3	26.1	2060.5	90.4	0.066	* 25.9	2060.0	89.1	9.203	0.036	0.934	37.2	14.5		
418	857	2.966	34.271	2307.	2107.	* 2221	* 444.1	25.0	2007.6	94.3	0.066	* 24.7	2069.3	92.9	8.059	0.053	0.933	40.1	17.2		
419	953	2.065	34.311	2303.	2211.	* 2225	* 541.4	30.6	2100.0	79.5	0.000	* 30.3	2102.6	70.1	10.749	7.969	0.706	24.5	1.3		
420	1053	2.614	34.337	2317.	2201.	* 2241	* 454.4	20.0	2002.7	92.3	0.077	* 25.6	2008.0	90.6	9.200	0.036	0.912	36.1	12.6		
421	1127	2.604	34.390	2315.	2224.	* 2247	* 547.1	31.2	2113.5	75.3	0.003	* 30.7	2115.7	77.0	11.003	7.950	0.703	22.6	-1.2		
422	1316	2.573	34.401	2337.	2232.	* 2260	* 499.0	20.5	2110.5	07.0	0.043	* 20.0	2119.1	04.9	10.210	7.991	0.850	20.1	3.9		
423	1430	2.615	34.545	2332.	2247.	* 2263	* 570.4	33.0	2137.3	70.7	7.903	* 32.4	2140.0	74.6	11.063	7.926	0.755	10.7	-7.0		
101	1499	2.572	34.563	2332.	2245.	* 2263	* 569.2	32.5	2134.0	77.6	7.909	* 31.9	2137.7	75.4	11.760	7.930	0.764	10.7	-7.7		
424	1590	2.712	34.619	2336.	2233.	* 2263	* 510.3	29.0	2110.2	03.0	0.034	* 20.4	2121.3	03.3	10.007	7.971	0.046	24.2	-0.0		
102	1741	2.540	34.642	2354.	2239.	* 2252	* 471.0	20.9	2119.5	92.0	0.060	* 20.3	2123.0	89.7	10.010	0.000	0.911	29.1	3.6		
103	1959	2.540	34.639	2343.	2244.	* 2263	* 523.3	30.0	2130.1	03.9	0.023	* 29.3	2133.9	00.9	11.349	7.945	0.822	10.1	-0.0		
104	2193	2.752	34.700	2330.	2221.	* 2243	* 465.0	26.4	2101.4	93.2	0.071	* 25.0	2105.9	89.6	10.365	7.904	0.913	24.6	-2.2		
105	2392	2.761	34.025	2344.	2217.	* 2229	* 436.1	24.7	2093.0	90.7	0.097	* 23.9	2090.5	94.0	9.920	0.003	0.966	27.6	0.2		
106	2574	2.599	34.030	2337.	2211.	* 2222	* 434.9	24.0	2000.2	90.1	0.096	* 23.9	2093.4	93.6	10.117	7.995	0.956	24.6	-3.4		
107	2750	2.400	34.029	2343.	2210.	* 2224	* 437.2	23.0	2095.4	97.0	0.095	* 24.1	2101.0	92.9	10.325	7.900	0.940	21.0	-6.0		
108	2902	2.193	34.002	2347.	2221.	* 2254	* 430.5	24.9	2097.9	90.2	0.100	* 23.9	2104.0	93.1	10.403	7.903	0.950	19.4	-10.0		
109	3192	1.919	34.779	2351.	2240.	* 2253	* 473.9	27.7	2122.0	90.3	0.062	* 26.6	2120.4	85.0	11.604	7.933	0.867	0.0	-21.4		
110	3444	1.593	34.751	2354.	2230.	* 2263	* 446.2	26.4	2115.5	94.1	0.005	* 25.2	2122.5	00.2	11.259	7.940	0.899	0.7	-23.3		
111	3601	1.377	34.729	2303.	2202.	* 2206	* 502.0	30.0	2146.7	05.3	0.039	* 20.6	2153.0	79.6	12.732	7.895	0.811	-2.0	-33.7		
112	3601	1.377	34.730	2366.	2244.	* 2204	* 433.9	25.9	2121.5	96.5	0.090	* 24.7	2129.0	90.4	11.103	7.955	0.920	0.0	-22.9		
115	3041	1.161	34.717	2350.	2265.	* 2266	* 520.1	31.7	2152.2	01.1	0.019	* 30.2	2159.6	75.2	13.670	7.064	0.766	-9.6	-42.3		
116	4035	0.930	34.700	2363.	2252.	* 2263	* 459.7	27.9	2133.5	90.6	0.073	* 26.4	2141.7	03.9	12.272	7.911	0.854	-3.7	-37.2		
117	4221	0.749	34.690	2361.	2269.	* 2204	* 523.2	32.0	2156.2	00.0	0.020	* 30.3	2164.4	74.3	14.147	7.049	0.750	-16.1	-50.3		
118	4424	0.577	34.607	2303.	2240.	* 2263	* 440.5	27.1	2120.2	92.6	0.000	* 25.6	2137.3	03.2	12.201	7.911	0.866	-0.3	-43.3		
119	4633	0.416	34.670	2363.	2273.	* 2267	* 523.0	32.5	2160.0	79.7	0.019	* 30.6	2109.0	72.6	14.771	7.031	0.730	-24.1	-60.1		
120	4839	0.324	34.673	2304.	2255.	* 2201	* 459.4	28.3	2137.2	09.5	0.074	* 20.6	2146.9	01.5	13.200	7.079	0.029	-10.5	-55.3		
121	5051	0.267	34.669	2362.	2277.	* 2272	* 540.9	33.7	2166.0	77.3	0.005	* 31.7	2175.6	69.7	15.003	7.799	0.709	-33.0	-71.5		
122	5304	0.267	34.667	2363.	2255.	* 2264	* 491.4	29.1	2136.0	90.0	0.070	* 26.2	2147.5	01.3	13.605	7.064	0.026	-26.5	-63.4		
123	5534	0.253	34.665	2304.	2271.	* 2271	* 509.7	31.0	2150.0	01.2	0.029	* 29.6	2160.9	72.5	15.046	7.000	0.737	-41.0	-01.4		
124	5004	0.263	34.666	2371.	2261.	* 2275	* 453.4	20.3	2142.5	90.3	0.077	* 26.2	2154.2	00.6	14.367	7.043	0.019	-36.0	-77.2		

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 66 1 8 12 72 0951 41 32.5 S 58 57.8 W 5742
 66 4 8 12 72 1655 41 31.8 S 58 55.5 W
 66 6 8 12 72 2331 41 33.8 S 58 51.5 W 5791

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS						CALC PARAMETERS P=1ATM, T=INSITU						CALC PARAMETERS P, T=INSITU							
SAMP NO	DEPTH (M)	TEMP (C)	SAL. (8/100)	TALK (ED/KG)	TIT (M/KG)	GC (M/KG)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	ICP (M/KG)	DELTA CO3= (M/KG)	DELTA CO3= (ARRG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)	(E-6)	(E-6)	(E-6)
482	48	17.458	35.778	2362.	2637.	* 2062	* 278.4	9.7	1888.8	226.6	8.389	* 9.7	1888.9	226.5	4.926	8.388	2.375	188.7	168.2
484	84	17.372	35.888	2367.	2648.	* 2064	* 287.4	10.8	1815.4	222.6	8.298	* 10.8	1815.7	222.4	5.872	8.295	2.339	176.4	153.8
486	188	14.918	35.558	2344.	2668.	* 2188	* 389.2	11.6	1863.5	192.9	8.263	* 11.5	1864.8	192.5	5.533	8.257	2.866	145.7	124.7
488	283	14.459	35.581	2347.	2867.	* 2184	* 299.1	11.3	1868.4	195.2	8.276	* 11.3	1861.2	194.6	5.421	8.266	2.829	147.1	126.8
410	381	12.854	35.264	2334.	2891.	* 2111	* 329.7	13.2	1987.8	178.8	8.234	* 13.1	1987.9	178.8	6.818	8.221	1.757	121.7	108.3
412	585	9.825	34.623	2383.	2896.	* 2124	* 327.9	14.9	1934.8	146.3	8.222	* 14.8	1936.8	145.3	6.256	8.284	1.474	95.8	73.9
418	846	4.436	34.222	2291.	2127.	* 2165	* 345.9	18.5	1989.5	119.8	8.186	* 18.3	1951.3	117.4	7.817	8.154	1.178	64.9	42.8
428	978	3.794	34.287	2295.	2153.	* 2175	* 398.4	21.4	2825.3	186.4	8.138	* 21.1	2827.3	184.6	7.948	8.188	1.849	51.8	27.7
422	1271	3.899	34.323	2315.	2186.	* 2226	* 422.3	23.7	2862.8	99.5	8.188	* 23.3	2865.4	97.3	8.749	8.858	8.979	41.8	17.8
424	1828	2.871	34.538	2331.	2228.	* 2255	* 482.3	27.3	2182.7	98.8	8.858	* 26.7	2186.8	87.4	18.177	7.952	8.884	27.9	2.8
182	1698	2.762	34.545	2335.	2239.	* 2263	* 537.8	38.5	2126.2	82.3	8.814	* 29.8	2129.5	79.7	11.299	7.947	8.887	19.6	-5.7
184	2889	2.812	34.718	2342.	2238.	* 2247	* 483.8	27.3	2112.8	98.7	8.857	* 26.6	2116.2	87.3	18.683	7.975	8.888	23.3	-3.1
186	2488	2.578	34.773	2353.	2224.	* 2261	* 429.2	24.5	2899.4	188.1	8.184	* 23.6	2184.6	95.7	9.851	8.887	8.978	27.6	-8.1
188	2889	2.476	34.811	2351.	2228.	* 2234	* 445.6	25.5	2185.7	96.8	8.889	* 24.5	2111.6	91.8	18.597	7.975	8.937	19.3	-9.7
112	3694	1.432	34.734	2362.	2253.	* 2277	* 475.8	28.3	2135.2	89.5	8.861	* 26.9	2142.8	83.5	12.193	7.914	8.858	8.7	-31.3
116	4188	8.988	34.718	2369.	2258.	* 2288	* 462.3	28.8	2139.2	98.7	8.872	* 26.5	2147.5	84.8	12.375	7.987	8.854	-4.6	-38.2
118	4585	8.453	34.685	2372.	2269.	* 2278	* 488.3	29.7	2152.7	86.6	8.855	* 28.8	2161.7	79.3	13.398	7.873	8.887	-15.4	-58.8
128	4928	8.292	34.676	2374.	2258.	* 2282	* 435.8	27.1	2137.4	93.5	8.893	* 25.4	2147.5	85.1	12.722	7.895	8.863	-16.2	-53.4
122	5337	8.258	34.671	2373.	2272.	* 2275	* 483.8	38.2	2156.3	85.6	8.851	* 28.2	2166.8	77.8	14.688	7.835	8.793	-31.3	-78.3
124	5724	8.278	34.671	2371.	2282.	* 2272	* 456.7	28.5	2143.9	89.7	8.874	* 26.4	2155.4	88.2	14.354	7.843	8.816	-35.8	-75.7

GEOSSECS ATLANTIC STATION CAST DATE TIME DEPTH LONGITUDE BOT DEPTH

54	7	5 12 72	1514	11.0 S	49 36.8 W	5333
54	9	5 12 72	2344	33 11.0 S	49 32.8 W	
54	11	7 12 72	2922	39 11.0 S	48 35.5 W	5358

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS						CALC PARAMETERS P=1ATH,T=INSITU						CALC PARAMETERS P.T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (E-6)	TIT TC02 (M/KG)	GC TC02 (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
901	12	14.187	34.374	2284.	2089.	* 2845 *	* 274.4	10.6	1885.2	192.2	8.308	* 18.6	1885.2	192.2	5.821	8.259	1.936	146.4	125.7
902	33	12.397	34.468	2252.	2026.	* 2668 *	* 278.7	11.0	1838.2	184.8	8.381	* 11.8	1838.3	184.7	5.814	8.388	1.866	138.6	117.9
903	69	9.413	34.418	2285.	2068.	* 2887 *	* 294.9	13.2	1889.6	157.2	8.261	* 13.2	1889.7	157.1	5.318	8.258	1.585	118.7	89.8
904	118	7.044	34.381	2282.	2095.	* 2127 *	* 333.5	16.2	1947.3	132.5	8.287	* 16.2	1947.5	132.3	6.266	8.283	1.338	95.5	64.5
905	159	5.742	34.361	2278.	2182.	* 2141 *	* 349.6	17.2	1958.6	126.3	8.187	* 17.2	1958.9	125.9	6.386	8.181	1.269	78.8	57.7
906	207	5.856	34.258	2275.	2189.	* 2136 *	* 357.4	18.1	1970.7	128.1	8.176	* 18.1	1971.2	119.7	6.793	8.168	1.282	72.2	58.9
907	285	5.864	34.224	2277.	2122.	* 2162 *	* 371.9	19.4	1989.0	113.6	8.158	* 19.4	1989.6	113.1	7.125	8.147	1.134	64.9	43.5
909	444	4.438	34.266	2281.	2134.	* 2168 *	* 383.5	20.5	2004.5	109.8	8.145	* 20.4	2005.4	108.2	7.454	8.128	1.085	58.0	37.8
910	515	4.048	34.191	2281.	2144.	* 2173 *	* 403.4	21.9	2018.9	103.2	8.124	* 21.7	2020.8	102.3	7.873	8.104	1.026	52.4	38.3
911	581	3.037	34.201	2281.	2143.	* 2173 *	* 397.5	21.7	2017.6	103.7	8.129	* 21.5	2018.8	102.7	7.831	8.106	1.038	52.2	38.8
912	662	3.476	34.211	2290.	2158.	* 2188 *	* 411.2	22.8	2034.7	100.6	8.116	* 22.5	2036.8	99.4	8.138	8.098	0.997	48.3	25.8
915	737	3.367	34.238	2289.	2169.	* 2201 *	* 443.5	24.8	2058.3	94.8	8.083	* 24.5	2051.7	92.8	8.817	8.055	0.931	41.8	18.4
916	817	3.225	34.264	2290.	2182.	* 2222 *	* 458.5	25.6	2064.4	92.8	8.073	* 25.3	2066.8	90.6	9.096	8.041	0.918	38.2	15.4
917	892	2.982	34.275	2290.	2187.	* * * * *	* 478.7	26.5	2071.2	89.2	8.062	* 26.2	2073.8	87.8	9.485	8.027	0.882	34.7	11.7
918	988	2.851	34.327	2386.	2284.	* * * * *	* 504.1	28.5	2090.7	84.8	8.035	* 28.2	2092.6	83.2	10.888	7.996	0.838	29.4	6.8
919	1096	2.785	34.386	2318.	2289.	* 2245 *	* 507.9	28.8	2095.9	84.3	8.032	* 28.4	2098.8	82.6	10.256	7.989	0.833	27.8	4.2
920	1200	2.657	34.417	2318.	2229.	* 2242 *	* 556.1	31.7	2118.9	78.4	8.997	* 31.2	2121.2	76.6	11.238	7.949	0.773	28.9	-3.0
921	1297	2.585	34.456	2328.	2222.	* 2296 *	* 528.1	29.7	2109.4	83.8	8.024	* 29.2	2111.8	81.8	10.657	7.972	0.810	24.4	8.2
922	1401	2.554	34.514	2329.	2232.	* 2267 *	* 527.1	30.1	2119.1	82.7	8.028	* 29.6	2121.8	80.6	10.864	7.964	0.815	23.1	-1.4
923	1504	2.595	34.563	2338.	2238.	* 2265 *	* 517.1	29.5	2116.3	84.2	8.027	* 28.9	2119.2	81.9	10.769	7.968	0.838	23.5	-1.3
924	1611	2.683	34.613	2335.	2242.	* 2271 *	* 546.8	31.2	2138.1	88.7	8.086	* 30.6	2133.1	78.3	11.433	7.942	0.795	18.9	-6.2
925	1626	2.584	34.619	2335.	2244.	* 2266 *	* 554.8	31.7	2132.6	79.8	8.088	* 31.0	2135.7	77.3	11.687	7.935	0.785	17.8	-7.4
926	1820	2.746	34.782	2332.	2228.	* 2268 *	* 587.4	28.8	2112.9	86.3	8.835	* 29.1	2116.5	83.4	10.888	7.963	0.848	22.8	-3.7
927	2048	2.953	34.791	2334.	2211.	* * * * *	* 448.8	25.2	2089.5	96.3	8.086	* 24.5	2093.6	92.9	9.881	8.005	0.947	29.4	3.8
928	2149	2.738	34.772	2331.	2219.	* 2255 *	* 479.1	27.2	2101.4	98.4	8.058	* 26.4	2105.7	86.9	10.642	7.973	0.886	22.3	-4.3
929	2332	2.810	34.828	2336.	2212.	* 2235 *	* 444.8	25.1	2089.9	97.8	8.089	* 24.3	2094.7	93.8	10.867	7.997	0.949	26.6	-8.6
930	2581	2.835	34.863	2331.	2191.	* * * * *	* 397.5	22.4	2063.8	105.6	8.131	* 21.7	2068.3	101.1	9.268	8.033	1.033	32.9	5.2
931	2651	2.732	34.868	2331.	2193.	* 2232 *	* 481.6	22.8	2065.8	104.4	8.127	* 21.9	2071.4	99.7	9.484	8.023	1.019	29.9	1.7
932	2838	2.459	34.834	2335.	2296.	* 2237 *	* 423.1	24.2	2082.2	99.6	8.106	* 23.3	2088.8	94.7	10.121	7.995	0.967	22.8	-6.8
933	2931	2.483	34.837	2341.	2216.	* * * * *	* 433.4	25.8	2093.5	97.5	8.096	* 24.8	2099.5	92.5	10.467	7.988	0.943	19.5	-9.7
711	3883	2.192	34.817	2338.	2209.	* 2248 *	* 419.5	24.3	2085.1	99.6	8.189	* 23.3	2091.5	94.3	10.292	7.987	0.962	19.4	-10.3
712	3232	1.939	34.794	2349.	2231.	* 2258 *	* 451.8	26.4	2118.7	93.9	8.081	* 25.2	2117.3	88.5	11.135	7.953	0.903	11.8	-18.5
715	3441	1.548	34.732	2356.	2248.	* 2261 *	* 451.8	26.0	2120.2	93.8	8.081	* 25.6	2127.2	87.2	11.383	7.944	0.888	7.7	-23.4
716	3641	1.191	34.725	2360.	2252.	* 2294 *	* 473.2	28.5	2134.6	88.9	8.062	* 27.1	2141.9	83.8	12.136	7.916	0.845	8.8	-31.1
717	3933	0.828	34.782	2358.	2248.	* 2283 *	* 459.3	28.8	2138.1	89.9	8.072	* 26.6	2138.8	83.4	12.189	7.914	0.848	-2.9	-36.8
719	4226	0.588	34.687	2362.	2268.	* * * * *	* 481.8	29.8	2144.4	85.8	8.052	* 28.1	2152.8	79.1	13.138	7.882	0.884	-11.5	-45.8
719	4472	0.323	34.673	2363.	2293.	* 2295 *	* 462.2	28.8	2148.8	88.5	8.068	* 27.1	2149.7	81.2	12.936	7.888	0.823	-13.2	-48.5
720	4662	0.239	34.672	2366.	2266.	* 2293 *	* 484.8	30.3	2158.9	84.9	8.049	* 28.5	2168.1	77.5	13.783	7.861	0.787	-19.9	-56.8
721	4896	0.221	34.678	2363.	2296.	* 2294 *	* 468.3	28.7	2138.7	88.5	8.069	* 26.9	2148.6	80.5	13.438	7.872	0.818	-20.5	-57.6
723	5193	0.195	34.668	2365.	2256.	* 2294 *	* 453.7	28.4	2138.1	89.8	8.075	* 26.5	2148.5	81.8	13.624	7.866	0.823	-24.9	-63.3

GEOSSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 78 1 3 1 73 0323 61 3.0 S 62 58.0 W 3696
 78 5 3 1 73 1329 61 0.7 S 62 59.0 W 3672
 78 7 3 1 73 2039 60 59.0 S 63 0.0 W 3816

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS				*CALC PARAMETERS P=1ATM, T=INSITU*							CALC PARAMETERS P.T=INSITU					DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TALK (EQ/KG)	TC02 (E-6)	TIT (E-6)	GC (M/KG)	TC02 (E-6)	PC02 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AH (E-9)	PH	ICP (E-6)	CO3= (CALC) (M/KG)	CO3= (ARRG) (M/KG)
581	6	1.345	33.833	2295.	2132.	* 2120	* 387.1	10.5	1995.2	110.4	9.223	* 10.5	1995.2	110.4	5.984	8.223	1.174	72.1	51.2		
582	41	1.348	33.832	2293.	2137.	* 2139	* 320.5	19.3	2003.6	114.2	0.207	* 19.2	2003.6	114.1	6.239	8.203	1.132	67.6	46.6		
583	65	-0.506	33.888	2296.	2146.	* 2146	* 312.5	20.2	2015.1	118.7	0.210	* 20.2	2015.2	118.6	6.206	8.207	1.099	63.8	42.0		
584	81	-0.947	33.925	2298.	2146.	* 2154	* 304.4	20.8	2014.1	111.9	0.219	* 20.8	2014.2	111.0	6.098	8.215	1.112	64.8	43.8		
585	96	-0.965	33.975	2299.	2151.	* 2170	* 313.0	20.6	2020.0	109.7	0.208	* 20.5	2021.8	109.5	6.253	8.204	1.098	62.4	41.3		
586	126	0.007	34.094	2305.	2184.	* 2200	* 392.4	24.9	2064.5	94.7	0.124	* 24.0	2064.0	94.5	7.609	8.119	0.944	47.2	26.0		
587	151	0.764	34.104	2310.	2200.	* 2210	* 439.0	26.9	2084.1	88.9	0.083	* 26.9	2084.4	88.7	8.377	8.077	0.889	41.3	20.8		
588	201	1.420	34.300	2320.	2215.	* 2236	* 470.7	29.1	2100.4	86.5	0.059	* 29.0	2100.8	86.2	8.086	8.051	0.866	38.4	17.1		
589	251	1.650	34.360	2325.	2224.	* 2237	* 491.6	29.1	2110.4	84.5	0.044	* 29.0	2110.9	84.1	9.252	8.034	0.847	36.8	14.6		
510	301	1.987	34.431	2329.	2239.	* 2263	* 539.6	31.7	2128.3	79.0	0.008	* 31.5	2128.9	78.6	10.097	7.996	0.793	30.1	8.5		
511	401	2.113	34.532	2343.	2252.	* 2275	* 546.2	31.0	2140.4	79.5	0.006	* 31.6	2141.1	79.3	10.232	7.990	0.803	30.0	8.2		
512	440	2.122	34.532	2349.	2252.	* 2274	* 538.9	31.3	2139.0	80.9	0.012	* 31.1	2140.6	80.2	10.135	7.994	0.813	30.7	8.0		
515	500	2.115	34.570	2345.	2254.	* 547.1	* 547.1	31.8	2142.3	79.9	0.006	* 31.6	2143.3	79.1	10.337	7.906	0.802	29.1	7.1		
109	500	2.116	34.579	2347.	2254.	* 2274	* 540.3	31.4	2141.6	81.8	0.011	* 31.2	2142.6	80.2	10.218	7.991	0.813	30.2	8.2		
516	600	2.102	34.619	2349.	2258.	* 549.1	* 549.1	31.9	2146.1	80.0	0.005	* 31.7	2147.2	79.1	10.455	7.901	0.803	28.3	6.8		
517	700	2.070	34.653	2351.	2257.	* 2272	* 537.2	31.3	2144.2	81.5	0.013	* 31.8	2145.6	80.5	10.339	7.906	0.817	28.9	6.3		
510	799	2.036	34.684	2355.	2253.	* 2270	* 507.6	29.6	2137.7	85.7	0.036	* 29.3	2139.3	84.4	9.092	8.003	0.858	32.8	9.2		
515	901	1.990	34.700	2357.	2254.	* 2294	* 503.9	29.4	2138.3	86.3	0.039	* 29.8	2140.1	84.8	9.916	8.004	0.863	31.6	8.4		
520	990	1.938	34.707	2356.	2256.	* 2273	* 513.7	30.0	2141.3	84.7	0.031	* 29.6	2143.3	83.1	10.194	7.992	0.846	29.8	5.6		
521	1099	1.040	34.721	2361.	2251.	* 478.4	* 478.4	20.1	2132.9	90.0	0.060	* 27.6	2135.1	80.2	9.627	8.017	0.898	33.3	9.6		
522	1223	1.754	34.723	2364.	2254.	* 2277	* 477.0	20.1	2135.8	90.1	0.061	* 27.7	2139.2	80.1	9.723	8.012	0.897	32.1	0.0		
523	1346	1.644	34.722	2366.	2264.	* 2277	* 503.0	20.0	2140.3	89.5	0.040	* 29.2	2151.8	83.7	10.327	7.906	0.892	26.6	2.2		
524	1409	1.526	34.730	2369.	2263.	* 2271	* 453.3	27.0	2132.6	93.3	0.080	* 26.5	2133.7	90.0	9.534	8.021	0.925	32.4	7.6		
110	1506	1.470	34.730	2360.	2256.	* 2270	* 467.3	27.0	2137.0	91.2	0.069	* 27.2	2140.0	88.7	9.790	8.009	0.904	30.1	5.2		
111	1707	1.332	34.727	2370.	2261.	* 2282	* 475.0	20.4	2143.0	89.6	0.062	* 27.0	2146.4	86.0	10.129	7.994	0.884	26.3	8.0		
112	1900	1.205	34.723	2370.	2264.	* 2276	* 482.9	20.0	2146.9	90.0	0.055	* 20.3	2150.0	85.0	10.407	7.979	0.865	22.4	-3.6		
115	2116	1.076	34.719	2370.	2266.	* 2277	* 487.6	20.5	2149.5	87.0	0.051	* 20.6	2153.0	83.6	10.004	7.966	0.851	19.0	-7.8		
116	2315	0.944	34.713	2372.	2263.	* 2271	* 460.0	20.5	2144.0	89.7	0.066	* 27.6	2149.5	85.9	10.619	7.974	0.874	19.1	-0.2		
117	2414	0.972	34.709	2373.	2263.	* 2263	* 464.7	20.3	2144.4	90.3	0.070	* 27.4	2149.3	86.3	10.633	7.973	0.878	18.5	-9.3		
110	2513	0.791	34.700	2371.	2263.	* 469.4	* 469.4	20.7	2145.1	89.2	0.065	* 27.7	2150.2	85.1	10.049	7.963	0.866	16.1	-11.9		
119	2714	0.670	34.703	2373.	2262.	* 2290	* 457.0	20.1	2143.1	90.0	0.075	* 27.1	2148.7	86.3	10.005	7.966	0.870	15.1	-13.7		
120	2913	0.596	34.703	2374.	2262.	* 2276	* 433.5	27.9	2142.0	91.3	0.079	* 26.0	2140.7	86.5	10.916	7.962	0.800	13.0	-16.5		
121	3112	0.562	34.705	2375.	2264.	* 2280	* 456.6	20.1	2143.0	90.0	0.076	* 27.0	2151.4	85.7	11.190	7.951	0.872	9.0	-20.3		
122	3309	0.510	34.697	2374.	2270.	* 2290	* 470.3	29.5	2153.4	87.1	0.057	* 20.2	2160.0	81.7	11.909	7.924	0.931	3.4	-27.4		
123	3510	0.440	34.691	2372.	2265.	* 2260	* 466.4	20.9	2147.5	88.6	0.067	* 27.5	2154.6	82.9	11.073	7.925	0.943	2.0	-29.6		
124	3615	0.426	34.692	2372.	2267.	* 2293	* 472.0	29.3	2159.1	97.6	0.061	* 27.9	2157.4	81.7	12.145	7.916	0.931	-0.6	-32.5		
721	3703	0.467	34.680	2370.	2261.	* 460.1	* 460.1	20.5	2142.0	89.7	0.072	* 27.0	2150.5	83.5	12.033	7.920	0.849	-1.0	-33.6		
722	3794	0.467	34.680	2373.	2265.	* 464.3	* 464.3	20.7	2147.0	89.3	0.069	* 27.3	2154.7	83.0	12.132	7.916	0.844	-1.6	-34.2		
723	3799	0.467	34.691	2363.	2260.	* 471.4	* 471.4	29.2	2141.4	87.4	0.061	* 27.7	2149.0	81.3	12.363	7.900	0.827	-3.4	-36.8		
724	3004	0.467	34.607	2373.	2267.	* 470.9	* 470.9	29.1	2149.6	80.2	0.063	* 27.7	2157.3	82.0	12.303	7.910	0.834	-2.7	-35.4		

GEOSCOES ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 76 1 31 12 72 1594 57 44.8 S 66 9.8 W 4598
 76 3 1 1 73 0110 57 43.8 S 66 12.8 W 4596
 76 7 1 1 73 1423 57 44.8 S 66 3.8 W 3798

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS										*CALC PARAMETERS P=1ATH.T=INSITU*										CALC PARAMETERS P.T=INSITU			
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0-00)	TALK (0-KG)	TIT (M/KG)	GC (E-6)	TC02 (M/KG)	TC02 (E-6)	TC02 (E-6)	PC02 (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AH (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)	
781	17	4.548	33.948	2288.	2897.	*	2128	*	298.9	15.3	1946.4	133.1	8.233	*	15.3	1946.4	133.1	5.588	8.233	1.344	98.9	68.1	
782	27	4.518	33.937	2293.	2893.	*	2115	*	273.9	14.8	1938.4	142.8	8.277	*	14.6	1938.4	141.9	5.296	8.276	1.412	93.6	74.8	
783	53	3.918	33.984	2289.	2181.	*	2133	*	288.9	15.8	1932.8	133.2	8.254	*	15.8	1932.1	133.1	5.597	8.252	1.323	86.6	63.7	
784	73	1.757	33.848	2291.	2111.	*	2132	*	279.4	16.5	1966.3	128.2	8.258	*	16.5	1966.4	128.1	5.538	8.257	1.271	81.3	68.3	
785	94	0.444	33.836	2284.	2118.	*	2127	*	288.8	18.8	1988.3	119.7	8.242	*	17.9	1988.5	119.5	5.788	8.238	1.183	72.5	51.5	
786	119	-0.269	33.864	2292.	2128.	*	2156	*	283.4	18.1	1987.9	119.9	8.248	*	18.1	1988.2	119.7	5.714	8.243	1.188	72.5	51.3	
787	144	-0.418	33.895	2287.	2123.	*	2141	*	284.9	18.3	1986.8	118.6	8.244	*	18.3	1986.4	118.3	5.774	8.239	1.176	78.9	49.7	
788	159	-0.348	33.922	2298.	2141.	*	2161	*	315.5	28.2	2818.8	118.8	8.286	*	28.2	2811.1	189.7	6.328	8.199	1.891	62.2	48.9	
789	186	-0.218	33.952	2288.	2135.	*	2158	*	388.7	19.7	2883.8	112.3	8.214	*	19.6	2883.4	111.9	6.215	8.287	1.114	64.2	42.9	
718	235	8.258	34.816	2298.	2149.	*	2168	*	325.8	28.4	2818.5	118.1	8.197	*	28.3	2819.8	189.7	6.486	8.188	1.894	61.6	48.2	
711	284	8.844	34.898	2382.	2158.	*	2171	*	345.1	21.1	2829.5	187.4	8.177	*	21.8	2838.1	186.9	6.832	8.165	1.888	38.4	36.9	
712	385	1.389	34.194	2313.	2195.	*	2111	*	423.8	25.9	2878.3	93.3	8.899	*	25.3	2877.1	92.6	8.238	8.884	0.928	43.4	21.6	
715	496	1.988	34.340	2321.	2214.	*	2249	*	474.8	27.8	2898.6	87.8	8.858	*	27.6	2899.6	86.8	9.148	8.839	0.874	36.8	14.8	
716	597	2.198	34.424	2358.	2244.	*	2259	*	548.8	31.3	2132.4	88.3	8.818	*	31.1	2133.8	79.4	18.322	7.986	8.881	28.6	6.3	
717	695	2.279	34.474	2338.	2234.	*	2259	*	497.7	28.8	2118.7	88.5	8.843	*	28.5	2128.1	85.4	9.658	8.815	8.863	33.9	11.3	
718	797	2.288	34.527	2342.	2254.	*	2278	*	562.8	32.5	2143.8	78.5	7.995	*	32.2	2144.6	77.3	18.883	7.963	8.782	24.9	2.1	
719	899	2.281	34.573	2346.	2258.	*	2298	*	555.4	32.1	2144.4	79.5	8.888	*	31.7	2146.2	78.1	18.851	7.963	8.792	24.9	1.8	
381	988	2.273	34.583	2353.	2251.	*	2251	*	518.5	29.5	2135.8	85.7	8.833	*	29.1	2137.7	84.2	18.893	7.996	8.853	38.2	6.9	
720	998	2.253	34.688	2351.	2258.	*	2279	*	544.5	31.5	2143.4	81.1	8.889	*	31.1	2147.4	79.6	18.733	7.969	8.887	25.5	2.2	
721	1847	2.251	34.638	2352.	2254.	*	2272	*	525.7	38.4	2139.9	83.7	8.823	*	38.8	2142.8	82.8	18.437	7.981	8.833	27.6	4.1	
722	1896	2.223	34.634	2357.	2258.	*	2299	*	522.8	38.2	2143.5	84.3	8.826	*	29.8	2145.6	82.6	18.412	7.982	8.838	27.7	4.8	
382	1118	2.238	34.617	2358.	2263.	*	2274	*	569.8	32.9	2152.8	78.1	7.991	*	32.5	2154.1	76.4	11.386	7.947	8.778	21.4	-2.2	
723	1145	2.192	34.648	2352.	2254.	*	2254	*	524.4	38.4	2148.8	83.8	8.824	*	29.9	2142.3	81.8	18.513	7.978	8.831	26.5	2.7	
724	1198	2.177	34.658	2357.	2251.	*	2251	*	498.8	28.7	2134.4	87.8	8.847	*	28.3	2138.8	85.9	18.818	7.999	8.873	38.1	6.2	
383	1238	2.181	34.651	2355.	2248.	*	2255	*	492.8	28.5	2131.2	88.3	8.858	*	28.8	2133.6	86.3	9.988	8.881	8.877	38.2	6.2	
384	1375	2.118	34.684	2381.	2251.	*	2278	*	482.3	28.8	2133.8	98.8	8.858	*	27.5	2135.8	87.8	9.914	8.884	8.892	38.4	6.8	
385	1538	2.058	34.699	2381.	2258.	*	2277	*	499.8	29.1	2139.5	87.4	8.844	*	28.5	2142.6	85.8	18.387	7.984	8.864	26.2	1.3	
386	1697	1.938	34.785	2387.	2268.	*	2254	*	528.9	38.5	2153.1	84.4	8.828	*	29.8	2156.4	81.8	18.961	7.988	8.832	21.4	-3.9	
387	1784	1.929	34.789	2389.	2268.	*	2288	*	485.5	28.4	2141.9	89.7	8.856	*	27.7	2145.3	86.9	18.269	7.988	8.884	26.5	1.1	
388	1838	1.812	34.714	2374.	2253.	*	2283	*	451.8	28.5	2133.4	95.1	8.885	*	25.9	2137.2	92.8	9.715	8.813	8.936	38.3	4.6	
389	1988	1.769	34.728	2367.	2257.	*	2272	*	478.7	28.2	2138.7	98.2	8.861	*	27.4	2142.6	86.9	18.412	7.982	8.885	23.9	-2.3	
318	2118	1.628	34.728	2372.	2272.	*	2278	*	512.8	38.3	2156.6	85.8	9.833	*	29.5	2168.8	81.7	11.246	7.949	8.832	17.2	-9.5	
311	2373	1.431	34.721	2372.	2263.	*	2291	*	477.5	28.5	2144.8	89.7	8.861	*	27.6	2149.6	85.8	18.888	7.967	8.874	18.6	-8.9	
312	2588	1.324	34.718	2375.	2286.	*	2251	*	478.5	29.5	2147.7	89.8	8.862	*	27.5	2152.9	85.6	18.955	7.959	8.871	16.8	-12.2	
315	2799	1.283	34.719	2373.	2252.	*	2251	*	433.7	28.2	2129.7	96.1	8.897	*	25.2	2135.5	91.3	18.342	7.985	8.938	19.4	-9.6	
316	2963	1.852	34.714	2379.	2288.	*	2251	*	459.5	27.8	2146.2	92.8	8.876	*	26.7	2152.3	87.8	11.826	7.958	8.886	13.8	-16.5	
317	3167	8.995	34.711	2374.	2268.	*	2274	*	488.7	29.1	2158.8	88.2	8.857	*	27.9	2157.8	83.1	11.744	7.938	8.845	6.7	-23.5	
318	3365	8.954	34.711	2374.	2268.	*	2274	*	488.8	29.1	2158.8	88.2	8.857	*	27.8	2157.4	82.8	11.951	7.923	8.842	4.8	-27.8	
319	3562	8.968	34.711	2374.	2254.	*	2256	*	433.4	28.4	2131.9	95.7	8.896	*	25.1	2139.2	89.6	11.115	7.954	8.912	8.3	-23.4	
328	3758	8.965	34.789	2377.	2281.	*	2259	*	448.8	27.2	2148.3	93.5	8.885	*	25.8	2148.8	87.2	11.688	7.935	8.887	3.3	-29.8	
321	3975	8.987	34.789	2374.	2263.	*	2287	*	463.1	28.1	2144.1	98.8	8.872	*	26.6	2152.1	84.2	12.228	7.913	8.897	-2.6	-33.8	
322	4179	8.974	34.718	2375.	2267.	*	2278	*	473.9	28.7	2148.9	89.3	8.863	*	27.2	2157.3	82.5	12.729	7.895	8.839	-7.2	-41.1	
323	4311	8.979	34.789	2374.	2288.	*	2274	*	441.3	28.8	2134.7	94.6	8.891	*	25.2	2143.5	87.2	12.868	7.919	8.888	-4.3	-38.8	
324	4486	8.995	34.789	2374.	2264.	*	2282	*	467.2	28.3	2145.3	98.3	8.868	*	26.7	2154.4	92.9	12.927	7.889	8.844	-11.1	-46.3	

567

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 79 1 6 1 73 1448 59 36.5 S 43 2.8 W 5927
 79 3 6 1 73 2026 59 56.3 S 44 54.8 W 4869
 79 5 7 1 73 0453 59 37.8 S 45 8.8 W 5182

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (E-6)	TALK (E-6)	TIT (E-6)	GC		CALC PARAMETERS P=1ATH.T=INSITU					CALC PARAMETERS P.T=INSITU					DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)
						TC02 (E-6)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AH (E-9)	PH		
101	4	1.703	34.061	2320.	2133.	* 2131	* 275.7	16.3	1903.7	133.0	8.269	* 16.3	1903.7	133.0	5.391	8.269	1.320	86.8	65.9
102	23	1.776	34.059	2320.	2123.	* 2147	* 259.8	15.3	1968.6	139.1	8.292	* 15.3	1968.6	139.0	5.118	8.291	1.389	92.6	71.7
103	72	0.489	34.386	2330.	2201.	* 2192	* 368.2	22.8	2073.9	184.3	8.195	* 22.8	2074.8	184.2	7.840	8.192	1.840	57.3	36.3
104	124	0.177	34.381	2345.	2204.	* 2219	* 356.6	22.4	2075.0	186.6	8.168	* 22.3	2075.3	186.4	6.877	8.163	1.872	59.2	38.8
105	103	-0.243	34.425	2343.	2223.	* 2228	* 405.1	29.9	2102.2	95.8	8.115	* 25.7	2102.6	94.7	7.796	8.108	0.956	47.8	25.6
106	217	-0.590	34.435	2344.	2221.	* 2218	* 392.1	25.3	2099.8	96.7	8.127	* 25.2	2099.5	96.3	7.614	8.118	0.972	48.3	26.9
107	267	-0.544	34.469	2346.	2232.	* 2230	* 419.1	27.8	2113.2	91.8	8.101	* 26.9	2113.7	91.4	8.118	8.091	1.389	92.6	71.7
108	339	-0.292	34.516	2359.	2231.	* 2253	* 409.9	26.1	2110.3	94.6	8.111	* 26.8	2111.9	94.8	7.981	8.098	0.951	45.1	23.3
109	437	-0.232	34.547	2349.	2248.	* 2252	* 467.1	29.7	2133.2	85.1	8.060	* 29.5	2134.1	84.4	9.076	8.042	0.894	34.7	12.7
110	537	-0.179	34.576	2354.	2243.	* 2253	* 437.8	27.7	2124.9	90.3	8.087	* 27.5	2126.8	89.5	8.596	8.066	0.987	39.8	16.7
111	631	-0.105	34.598	2356.	2252.	* 2245	* 462.8	29.2	2136.8	86.8	8.066	* 29.8	2137.2	85.8	9.115	8.040	0.870	34.5	12.8
112	700	-0.001	34.620	2357.	2248.	* 2262	* 446.1	28.2	2138.5	89.3	8.080	* 27.9	2131.9	88.2	8.070	8.052	0.895	36.4	13.7
113	741	0.004	34.631	2360.	2257.	* 2268	* 469.6	29.5	2141.2	86.3	8.060	* 29.2	2142.7	85.1	9.318	8.031	0.864	33.8	18.2
116	834	0.132	34.646	2361.	2253.	* 2261	* 454.8	28.5	2135.7	88.9	8.074	* 28.1	2137.4	87.5	9.182	8.041	0.889	34.6	11.5
117	931	0.130	34.654	2362.	2256.	* 2264	* 461.1	28.9	2139.2	87.9	8.068	* 28.5	2141.1	86.4	9.314	8.031	0.977	32.6	9.3
118	1021	0.129	34.655	2363.	2259.	* 2277	* 468.3	29.4	2142.7	86.9	8.062	* 28.9	2144.8	85.3	9.524	8.021	0.866	30.8	7.2
119	1110	0.130	34.659	2303.	2263.	* 2260	* 481.7	30.2	2140.8	84.8	8.051	* 29.7	2150.3	83.8	9.863	8.006	0.843	27.6	3.8
120	1215	0.152	34.669	2366.	2254.	* 2277	* 443.9	27.8	2135.8	91.2	8.084	* 27.3	2137.5	89.2	9.219	8.035	0.906	33.8	8.8
121	1321	0.000	34.658	2364.	2260.	* 2274	* 468.8	29.4	2143.7	86.9	8.062	* 28.9	2146.4	84.8	9.786	8.009	0.861	27.6	3.2
122	1463	0.061	34.661	2367.	2253.	* 2244	* 435.0	27.4	2133.4	92.2	8.091	* 26.8	2136.4	89.7	9.278	8.033	0.912	31.2	6.4
123	1490	0.050	34.663	2365.	2259.	* 2266	* 460.8	29.8	2142.1	88.0	8.065	* 28.4	2145.1	85.5	9.800	8.008	0.869	26.7	1.7
501	1544	-0.014	34.668	2362.	2254.	* 2256	* 452.6	28.5	2136.5	89.8	8.075	* 27.9	2139.6	86.4	9.706	8.013	0.878	27.2	2.1
124	1591	0.005	34.658	2366.	2252.	* 2278	* 435.8	27.4	2132.4	92.2	8.091	* 26.8	2135.7	89.5	9.381	8.028	0.918	29.8	4.6
502	1645	-0.041	34.661	2363.	2250.	* 2250	* 436.5	27.5	2138.9	91.6	8.089	* 26.9	2134.2	88.8	9.475	8.023	0.903	28.6	3.2
503	1795	-0.070	34.663	2366.	2257.	* 2259	* 449.3	28.4	2139.1	89.6	8.078	* 27.7	2142.7	86.6	9.858	8.006	0.888	24.9	-1.8
504	1095	-0.004	34.656	2368.	2252.	* 2264	* 450.6	28.5	2134.6	88.9	8.076	* 27.7	2138.5	85.8	10.002	8.000	0.871	23.1	-3.1
505	1995	-0.102	34.655	2364.	2251.	* 2270	* 435.6	27.6	2131.8	91.6	8.090	* 26.8	2133.9	88.3	9.771	8.010	0.897	24.5	-1.9
506	2093	-0.123	34.657	2368.	2250.	* 2250	* 443.8	28.1	2131.9	90.8	8.082	* 27.3	2136.2	86.5	10.050	7.990	0.879	21.8	-5.8
507	2193	-0.155	34.653	2363.	2252.	* 2250	* 441.1	28.0	2133.4	90.6	8.085	* 27.1	2137.9	87.0	10.070	7.997	0.883	21.2	-6.0
508	2342	-0.178	34.653	2368.	2249.	* 2261	* 439.8	27.9	2130.6	90.5	8.085	* 27.8	2135.4	86.6	10.205	7.991	0.880	19.2	-8.4
509	2492	-0.215	34.656	2363.	2251.	* 2262	* 437.8	27.8	2132.1	91.1	8.080	* 26.8	2137.2	87.8	10.200	7.980	0.883	17.9	-10.2
511	2009	-0.276	34.653	2363.	2242.	* 2262	* 409.3	26.1	2120.8	93.9	8.114	* 25.8	2126.1	90.9	10.047	7.990	0.923	17.3	-12.1
512	3002	-0.307	34.651	2361.	2254.	* 2258	* 450.6	29.7	2136.8	88.4	8.075	* 27.5	2143.1	83.4	11.194	7.951	0.847	7.5	-22.7
513	3260	-0.328	34.643	2362.	2250.	* 2238	* 434.9	27.8	2131.1	91.1	8.090	* 26.5	2137.8	85.6	11.019	7.958	0.870	7.5	-23.4
516	3377	-0.340	34.644	2356.	2236.	* 2249	* 409.1	26.1	2114.7	95.2	8.113	* 24.9	2121.7	89.3	10.545	7.977	0.907	9.8	-21.5
518	3931	-0.361	34.642	2362.	2232.	* 2252	* 383.5	24.5	2106.7	100.8	8.139	* 23.2	2114.8	94.8	10.341	7.985	0.954	8.4	-24.6
519	4033	-0.356	34.642	2359.	2241.	* 2247	* 415.7	26.6	2120.2	94.2	8.107	* 25.1	2120.6	87.3	11.367	7.944	0.887	-1.1	-34.8
520	4239	-0.344	34.641	2359.	2242.	* 2235	* 410.7	26.7	2121.6	93.7	8.104	* 25.2	2130.3	86.4	11.664	7.933	0.870	-4.9	-39.5
522	4653	-0.313	34.647	2360.	2244.	* 2271	* 422.5	26.9	2123.9	93.2	8.101	* 25.3	2133.4	85.3	12.220	7.913	0.866	-12.3	-40.6
523	4059	-0.292	34.647	2358.	2247.	* 2251	* 437.4	27.9	2120.6	90.5	8.087	* 26.1	2130.5	82.4	12.075	7.890	0.837	-18.5	-55.6
524	5059	-0.271	34.643	2356.	2247.	* 2250	* 443.1	28.2	2129.4	89.3	8.081	* 26.4	2139.7	81.8	13.200	7.077	0.822	-23.1	-61.1

GEOSIDS ATLANTIC STATION CAST DATE T. TIME LONGITUDE BOT DEPTH
 92 4 13 1 73 0519 56 17.8 S 24 55.5 W 7928
 92 5 13 1 73 1858 56 15.7 S 24 54.5 W 7369
 92 14 15 1 73 0657 56 18.3 S 24 58.7 W 7918

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)
				TALK (M/KG) (E-6)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (M/KG) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH (E-9)	ICP (E-6)			
615	1	0.976	33.732	2288.	2138.	* 2129	* 318.1	18.9	1995.8	115.3	0.217	* 18.9	1995.8	115.3	6.862	8.217	1.148	69.8	48.2
616	28	0.983	33.793	2289.	2134.	* 2148	* 314.5	19.3	2081.2	113.5	0.212	* 19.3	2081.2	113.5	6.168	8.218	1.123	67.8	46.1
617	47	0.978	33.819	2294.	2138.	* 2148	* 293.1	18.3	1992.9	118.8	0.237	* 18.3	1993.8	118.7	5.813	8.236	1.177	72.1	51.1
618	68	-0.619	33.912	2381.	2166.	* 2142	* 345.7	22.4	2841.2	182.4	0.171	* 22.4	2841.3	182.3	6.798	8.168	1.817	55.4	34.4
619	82	-0.783	33.972	2382.	2169.	* 2165	* 358.1	22.8	2844.9	181.3	0.165	* 22.7	2845.1	181.2	6.882	8.162	1.887	54.2	33.1
620	97	-0.725	34.042	2385.	2189.	* 2169	* 395.7	25.7	2871.2	92.1	0.118	* 25.7	2871.4	91.9	7.695	8.114	8.918	44.9	23.8
621	110	-0.360	34.169	2314.	2195.	* 2282	* 395.8	25.4	2875.8	93.8	0.128	* 25.3	2876.8	93.6	7.668	8.115	8.938	46.4	25.3
622	157	0.934	34.346	2326.	2237.	* 2217	* 515.5	31.9	2126.6	78.5	0.828	* 31.8	2126.9	78.3	9.686	8.814	8.788	38.8	9.6
481	200	0.765	34.455	2334.	2231.	* 2256	* 472.1	28.9	2116.3	85.8	0.857	* 28.8	2116.7	85.4	9.927	8.849	8.863	37.7	16.3
623	287	1.265	34.582	2336.	2239.	* 2266	* 583.8	38.3	2126.8	82.7	0.834	* 38.2	2126.4	82.4	9.433	8.825	8.833	34.6	13.3
482	283	1.435	34.689	2346.	2253.	* 2278	* 526.7	31.4	2148.7	88.9	0.818	* 31.3	2141.2	88.5	9.849	8.887	8.817	32.1	18.6
624	287	1.267	34.588	2344.	2255.	* 2263	* 538.2	32.3	2143.8	78.9	0.888	* 32.2	2144.4	78.4	10.873	7.997	8.795	38.8	8.5
483	372	1.648	34.673	2354.	2248.	* 2269	* 485.7	28.7	2131.5	87.7	0.852	* 28.6	2132.3	87.1	9.174	8.837	8.886	38.1	16.3
484	432	1.634	34.685	2358.	2253.	* 2279	* 498.6	29.8	2136.6	87.4	0.849	* 28.8	2137.5	86.7	9.298	8.832	8.881	37.2	15.3
485	582	1.529	34.711	2357.	2247.	* 2265	* 471.4	28.8	2129.1	89.9	0.864	* 27.8	2138.3	88.9	9.181	8.841	8.985	38.3	16.8
486	832	1.158	34.788	2368.	2255.	* 2261	* 482.6	29.1	2138.6	87.4	0.854	* 28.7	2148.2	86.8	9.339	8.821	8.875	33.2	18.3
487	981	0.929	34.786	2361.	2258.	* 2272	* 485.6	29.5	2142.2	96.3	0.851	* 29.1	2144.2	84.7	9.742	8.811	8.862	38.7	7.3
488	1888	0.928	34.785	2365.	2253.	* 2262	* 456.6	27.7	2134.1	91.1	0.876	* 27.3	2136.3	89.3	9.277	8.833	8.989	34.4	18.7
489	1188	0.787	34.688	2368.	2268.	* 2253	* 491.7	38.1	2145.1	84.7	0.845	* 29.7	2147.5	82.9	18.864	7.997	8.842	27.8	3.1
418	1379	0.571	34.684	2362.	2259.	* 2267	* 479.3	29.5	2143.1	86.3	0.854	* 29.8	2145.9	84.1	18.819	7.999	8.855	26.5	1.9
411	1577	0.447	34.682	2361.	2268.	* 2268	* 483.4	29.9	2144.8	85.2	0.858	* 29.3	2148.8	82.7	18.381	7.987	8.841	23.2	-1.9
412	1776	0.362	34.679	2364.	2254.	* 2269	* 453.2	28.1	2135.8	98.1	0.876	* 27.5	2139.4	87.1	9.883	8.885	8.886	25.7	-8.1
1481	1786	0.282	34.672	2363.	2258.	* 2268	* 467.7	29.1	2141.5	87.4	0.863	* 28.4	2145.1	84.5	18.196	7.992	8.859	23.8	-2.8
1482	1986	0.2	34.669	2364.	2278.	* 2257	* 585.7	31.6	2156.5	81.9	0.832	* 38.8	2168.4	78.8	11.175	7.952	8.888	15.2	-11.2
1483	2186	0.1	34.667	2353.	2254.	* 2255	* 451.6	28.3	2136.1	89.5	0.876	* 27.5	2148.6	85.9	18.264	7.989	8.873	28.3	-6.8
1484	2386	0.88	34.665	2368.	2274.	* 2267	* 584.1	31.7	2168.5	81.9	0.833	* 38.7	2165.2	78.2	11.561	7.937	8.794	18.4	-17.3
1485	2588	0.8	34.663	2365.	2258.	* 2257	* 456.7	28.8	2148.7	88.5	0.872	* 27.8	2146.8	84.2	18.769	7.968	8.856	14.2	-14.2
1486	2789	0.8	34.661	2365.	2262.	* 2271	* 478.8	29.6	2146.8	86.4	0.861	* 28.5	2151.6	81.9	11.269	7.948	8.832	9.6	-19.5
1487	2989	-0.885	34.668	2362.	2268.	* 2256	* 499.3	31.6	2154.7	81.8	0.838	* 38.3	2168.6	77.1	12.177	7.914	8.783	2.4	-27.4
1488	3198	-0.1	34.656	2363.	2259.	* 2246	* 464.6	29.4	2142.7	86.9	0.864	* 28.1	2149.1	81.8	11.598	7.936	8.831	4.6	-25.9
1489	3398	-0.2	34.653	2368.	2255.	* 2259	* 458.5	29.1	2138.5	87.4	0.869	* 27.8	2145.4	81.8	11.788	7.932	8.831	2.2	-29.1
1418	3592	-0.285	34.651	2362.	2253.	* 2256	* 445.8	28.3	2135.1	89.5	0.881	* 27.8	2142.4	83.6	11.598	7.936	8.849	1.3	-38.8
1411	3783	-0.3	34.647	2359.	2247.	* 2248	* 434.3	27.7	2128.3	91.8	0.888	* 26.3	2136.8	84.7	11.568	7.937	8.868	-8.2	-33.8
1412	3996	-0.3	34.646	2368.	2258.	* 2254	* 448.6	28.1	2132.8	89.9	0.884	* 26.6	2148.1	83.3	11.945	7.923	8.846	-4.5	-38.1
1415	4296	-0.358	34.647	2359.	2239.	* 2242	* 418.2	26.2	2117.5	95.3	0.112	* 24.7	2126.4	87.9	11.587	7.939	8.893	-4.3	-39.1
1416	4598	-0.3	34.644	2359.	2256.	* 2249	* 482.9	29.5	2148.2	86.3	0.864	* 27.8	2149.4	78.8	13.245	7.878	8.881	-17.9	-53.9
1417	4981	-0.36	34.644	2368.	2239.	* 2254	* 487.8	26.8	2117.2	95.8	0.115	* 24.3	2127.4	87.3	12.884	7.918	8.887	-14.3	-51.6
1418	5282	-0.3	34.646	2362.	2248.	* 2247	* 428.8	27.3	2128.6	92.1	0.895	* 25.5	2139.2	83.3	13.832	7.885	8.846	-23.2	-61.8
1419	5582	-0.3	34.644	2359.	2245.	* 2258	* 428.8	27.3	2125.7	92.8	0.886	* 25.3	2136.9	82.8	13.398	7.873	8.848	-29.8	-69.8
1420	5797	-0.382	34.645	2361.	2231.	* 2248	* 448.9	28.1	2132.9	98.8	0.884	* 26.8	2144.6	88.4	14.153	7.849	8.816	-36.8	-78.2
1421	6188	-0.3	34.647	2359.	2249.	* 2251	* 448.5	28.1	2131.8	98.8	0.884	* 25.9	2143.3	79.8	14.565	7.837	8.811	-43.2	-86.8
1423	6483	-0.2	34.648	2359.	2248.	* 2254	* 438.8	27.9	2129.7	98.5	0.886	* 25.6	2142.6	79.8	14.918	7.827	8.818	-49.2	-93.5
1424	6582	-0.23	34.647	2361.	2251.	* 2249	* 442.2	28.1	2132.9	98.8	0.883	* 25.8	2148.8	79.2	15.156	7.819	8.885	-51.9	-96.6

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 95 2 18 1 73 1799 57 32.8 S 17 26.8 W 4758
 95 3 18 1 73 2318 57 29.2 S 17 22.7 W

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (E-6)	TALK (E-6)	TIT (E-6)	*CALC PARAMETERS P=1ATM,T=INSITU*					CALC PARAMETERS P,T=INSITU					DELTA CO3- (M/KG)	DELTA CO3- (ARRG) (M/KG)		
						*GC TCO2 (M/KG) (E-6)	*PCO2 (ATM) (E-6)	*H2CO3 (M/KG) (E-6)	*HCO3- (M/KG) (E-6)	*CO3- (M/KG) (E-6)	PH	*H2CO3 (M/KG) (E-6)	*HCO3- (M/KG) (E-6)	*CO3- (M/KG) (E-6)	PH			ICP (E-6)	
311	15	1.893	33.564	2277.	2182.	* 2106	* 273.8	16.8	1968.2	123.8	8.262	* 16.8	1968.2	123.8	5.483	8.261	1.230	78.6	57.8
312	78	8.236	33.618	2293.	2119.	* 2186	* 288.4	18.1	1982.2	118.7	8.242	* 18.1	1982.4	118.5	5.768	8.248	1.168	71.8	58.8
315	147	-8.398	33.942	2381.	2168.	* 2178	* 353.2	22.7	2844.1	181.2	8.163	* 22.6	2844.4	180.9	6.959	8.157	1.894	53.5	32.3
316	205	1.324	34.329	2328.	2233.	* 2241	* 581.7	38.4	2121.1	81.5	8.834	* 38.4	2121.5	81.2	9.433	8.825	8.817	33.4	12.8
317	274	1.468	34.491	2337.	2248.	* 2265	* 587.9	38.3	2126.9	82.8	8.831	* 38.2	2127.5	82.4	9.539	8.828	8.833	34.1	12.5
318	355	1.688	34.588	2347.	2264.	* 2272	* 571.1	33.8	2154.2	76.8	7.987	* 33.7	2154.9	75.5	18.659	7.972	8.755	26.6	4.8
319	436	1.677	34.634	2358.	2256.	* 2275	* 529.8	31.3	2143.2	81.5	8.818	* 31.1	2144.1	80.8	9.991	8.888	8.821	31.3	9.4
320	561	1.642	34.688	2356.	2251.	* 2268	* 489.5	28.9	2134.8	87.2	8.858	* 28.7	2136.8	86.3	9.392	8.827	8.877	33.8	13.5
321	659	1.514	34.687	2358.	2247.	* 2272	* 467.6	27.9	2128.8	98.4	8.828	* 27.5	2138.1	89.3	9.893	8.841	8.988	38.8	15.5
322	758	1.462	34.782	2361.	2269.	* 2268	* 536.8	32.8	2156.3	88.7	8.813	* 31.6	2157.8	79.6	18.413	7.982	8.889	27.4	4.7
323	857	1.398	34.711	2368.	2249.	* 2273	* 466.9	27.9	2138.6	98.6	8.868	* 27.5	2132.3	89.1	9.254	8.834	8.987	36.2	13.1
326	945	1.219	34.787	2368.	2267.	* 2272	* 527.5	31.7	2154.2	81.1	9.819	* 31.3	2158.8	79.7	18.454	7.981	8.811	26.8	2.7
324	958	1.238	34.786	2368.	2261.	* 2269	* 584.9	38.3	2146.5	84.2	8.836	* 29.9	2148.4	82.7	18.851	7.998	8.841	28.9	5.5
388	1895	1.826	34.788	2364.	2271.	* 2271	* 525.8	31.8	2157.9	81.3	8.828	* 31.3	2160.1	79.6	18.559	7.976	8.889	24.6	8.8
389	1195	8.851	34.692	2384.	2251.	* 2271	* 451.7	27.5	2131.9	91.6	8.888	* 27.1	2134.3	89.6	9.291	8.832	8.911	33.7	9.7
212	1273	1.887	34.785	2368.	2257.	* 2266	* 467.8	28.3	2139.1	89.5	8.867	* 27.8	2141.7	87.4	9.643	8.816	8.898	38.8	6.6
318	1297	1.8	34.689	2365.	2268.	* 2275	* 589.8	38.9	2153.8	83.4	8.832	* 38.4	2156.3	81.3	18.468	7.988	8.827	24.5	8.2
216	1527	8.725	34.692	2367.	2265.	* 2276	* 487.1	29.8	2149.2	85.9	8.858	* 29.2	2152.3	83.5	18.272	7.988	8.849	24.5	-8.5
218	1859	8.448	34.681	2365.	2275.	* 2275	* 526.1	32.6	2162.6	79.9	9.817	* 31.8	2166.3	77.8	11.465	7.941	8.782	14.3	-11.8
219	2898	8.349	34.677	2364.	2258.	* 2271	* 466.5	29.8	2141.8	88.1	8.865	* 28.2	2145.2	84.6	18.461	7.988	8.868	28.8	-6.8
220	3257	8.258	34.673	2364.	2271.	* 2271	* 518.1	31.8	2157.9	81.3	8.829	* 30.9	2162.4	77.7	11.598	7.936	8.798	11.8	-16.4
221	2495	8.178	34.678	2364.	2258.	* 2286	* 462.5	28.9	2141.1	87.9	8.867	* 28.8	2146.2	83.9	18.788	7.967	8.852	14.9	-13.2
281	2663	8.188	34.667	2363.	2252.	* 2258	* 445.2	27.9	2133.5	98.8	8.882	* 26.9	2138.9	86.1	18.589	7.975	8.875	15.3	-13.3
222	2695	8.899	34.666	2366.	2267.	* 2268	* 486.1	30.5	2152.1	84.4	8.848	* 29.4	2157.4	80.1	11.512	7.939	8.814	8.9	-19.8
282	2861	8.836	34.664	2363.	2276.	* 2267	* 528.7	33.3	2164.4	78.3	8.813	* 32.1	2178.8	74.8	12.674	7.897	8.752	8.8	-28.5
284	3258	-8.181	34.658	2364.	2284.	* 2268	* 478.5	30.3	2148.8	84.9	8.853	* 29.8	2155.3	79.7	11.994	7.921	8.818	1.7	-29.8
285	3457	-8.173	34.658	2362.	2245.	* 2252	* 422.8	26.8	2124.5	93.7	8.182	* 25.5	2131.7	87.8	18.887	7.963	8.892	7.3	-24.2
286	3658	-8.258	34.653	2361.	2268.	* 2251	* 471.6	30.8	2144.6	85.4	8.858	* 28.6	2151.9	79.5	12.321	7.989	8.987	-3.7	-36.8
288	4862	-8.313	34.652	2363.	2281.	* 2268	* 467.6	29.8	2145.3	85.9	8.851	* 28.3	2153.4	79.3	12.694	7.896	8.886	-9.4	-43.3
289	4265	-8.303	34.652	2361.	2248.	* 2272	* 431.9	27.5	2128.9	91.6	8.892	* 26.8	2137.6	84.4	12.822	7.928	8.858	-7.3	-41.9
218	4472	-8.38	34.651	2368.	2257.	* 2259	* 463.4	29.5	2141.1	86.3	8.864	* 27.8	2150.1	79.1	13.898	7.883	8.883	-15.7	-51.2
211	4679	-8.298	34.651	2361.	2248.	* 2259	* 432.4	27.5	2128.8	91.6	8.892	* 25.9	2138.4	83.8	12.587	7.983	8.851	-14.2	-58.6
223	4718	-8.279	34.658	2359.	2249.	* 2257	* 488.6	28.1	2131.8	89.9	8.884	* 26.3	2148.6	82.1	12.784	7.893	8.833	-16.5	-53.8
224	4718	-8.279	34.649	2368.	2266.	* 2268	* 495.1	31.5	2152.7	81.7	8.838	* 29.7	2162.8	74.4	14.265	7.846	8.755	-24.2	-68.7

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

1/5

1/5

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	MEASURED PARAMETERS					*CALC PARAMETERS P-T=INSITU*					CALC PARAMETERS P,T=INSITU								
	DEPTH (M)	TEMP (C)	SAL (8/100)	TALK (EO/KG)	TIT (M/KG)	* GC TCO2 (M/KG)	* PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP	DELTA CO3= (CALC)	DELTA CO3= (ARRG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)
102	2	8.182	33.559	2298.	2124.	*	* 285.8	17.9	1986.8	120.1	8.248	* 17.9	1986.8	128.8	5.649	8.248	1.181	73.8	52.9
101	2	8.182	33.562	2288.	2112.	*	* 267.3	16.8	1969.3	125.9	8.272	* 16.8	1969.3	125.9	5.343	8.272	1.238	79.6	58.8
103	32	-1.245	33.982	2307.	2158.	*	* 389.1	28.5	2026.9	118.5	8.213	* 28.5	2027.8	118.5	6.139	8.212	1.898	63.9	42.9
104	167	-1.337	34.358	2348.	2224.	*	* 395.1	26.6	2184.6	92.9	8.117	* 26.5	2184.8	92.7	7.718	8.112	8.934	45.5	24.4
105	167	-8.382	34.581	2346.	2238.	*	* 448.3	28.2	2121.2	88.6	8.882	* 28.1	2121.5	88.4	8.483	8.876	8.894	48.8	19.5
106	337	8.941	34.687	2365.	2268.	*	* 588.3	38.9	2153.8	83.3	8.833	* 38.7	2154.5	82.8	9.558	8.828	8.842	34.8	12.3
107	485	8.712	34.689	2364.	2258.	*	* 471.8	28.9	2141.2	87.9	8.862	* 28.7	2142.2	87.1	9.872	8.842	8.886	37.1	15.8
108	675	8.495	34.679	2363.	2273.	*	* 526.3	32.5	2168.7	79.8	8.817	* 32.2	2162.8	78.8	10.237	7.998	8.881	27.2	4.6
109	885	8.384	34.688	2357.	2263.	*	* 586.5	31.4	2158.8	81.6	8.831	* 31.1	2151.7	80.2	10.114	7.995	8.815	26.9	3.7
110	1089	8.281	34.678	2367.	2275.	*	* 515.8	32.1	2162.1	88.8	8.826	* 31.6	2164.2	79.1	10.432	7.982	8.884	24.1	8.3
111	1289	8.188	34.674	2363.	2262.	*	* 479.9	38.8	2146.6	85.4	8.853	* 29.5	2149.2	83.3	9.981	8.881	8.847	26.4	2.1
112	1738	-8.823	34.666	2363.	2262.	*	* 475.9	38.8	2146.6	85.3	8.855	* 29.3	2158.1	82.6	10.338	7.985	8.839	21.4	-4.3
115	1556	-8.112	34.662	2363.	2257.	*	* 458.1	29.8	2148.8	88.8	8.878	* 28.2	2144.8	84.8	10.244	7.998	8.861	21.8	-5.5
116	2247	-8.186	34.657	2364.	2259.	*	* 459.9	29.2	2142.4	87.4	8.868	* 28.3	2146.9	83.8	10.526	7.978	8.851	17.4	-9.9
117	2495	-8.253	34.656	2351.	2254.	*	* 451.5	28.7	2136.8	88.4	8.875	* 27.8	2141.9	84.3	10.611	7.974	8.857	15.3	-12.9
118	2744	-8.297	34.655	2363.	2254.	*	* 445.2	28.4	2136.1	89.6	8.881	* 27.3	2141.7	85.8	10.716	7.978	8.864	13.1	-15.9
120	3242	-8.384	34.651	2364.	2259.	*	* 456.7	29.2	2142.3	87.5	8.878	* 28.8	2148.9	82.2	11.584	7.959	8.935	4.3	-26.5
121	3493	-8.418	34.658	2366.	2247.	*	* 413.5	36.5	2125.6	94.9	8.118	* 25.2	2132.9	98.9	10.733	7.969	8.983	7.8	-23.9
122	3712	-9.454	34.648	2358.	2259.	*	* 467.2	38.8	2143.8	85.3	8.868	* 29.5	2151.3	79.2	12.345	7.988	8.885	-5.2	-37.8
124	4177	-8.466	34.646	2361.	2247.	*	* 426.8	27.3	2127.6	92.1	8.897	* 25.8	2136.2	85.8	11.794	7.923	8.864	-5.5	-39.8

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 39 2 22 1 73 1940 50 1.5 S 0 1.5 E 5363
 89 4 23 1 73 0930 50 2.2 S 0 8.2 E
 89 8 24 1 73 1413 59 50.1 S 0 9.5 W
 89 10 24 1 73 2025 59 57.1 S 0 4.6 W 5357

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (ED/KG)	TIT (M/KG)	GC TC02 (M/KG)	*CALC PARAMETERS P=1ATH,T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (M/KG)	
							PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH			ICP (E-6)
481	1	0.965	34.103	2329.	2249.	* 2151	* 281.0	17.1	2002.9	129.0	0.261	* 17.1	2002.9	129.0	5.407	0.261	1.209	82.7	61.0
482	24	0.191	34.101	2326.	2159.	* 2145	* 295.3	18.5	2019.3	121.2	0.230	* 18.5	2019.3	121.1	5.707	0.230	1.211	74.6	53.7
484	50	-1.139	34.279	2333.	2198.	* 2211	* 350.2	23.1	2071.0	103.1	0.160	* 23.1	2071.9	103.0	6.023	0.160	1.035	56.2	35.2
485	75	-1.029	34.393	2342.	2210.	* 2220	* 331.7	23.9	2094.5	101.6	0.165	* 23.0	2094.7	101.5	6.000	0.162	1.023	54.5	33.4
486	95	-1.026	34.396	2339.	2219.	*	* 301.9	25.9	2090.0	95.1	0.132	* 25.9	2090.2	95.0	7.447	0.128	0.957	47.8	26.7
487	145	-0.528	34.543	2351.	2241.	* 2260	* 433.5	27.9	2123.3	89.0	0.089	* 27.0	2123.6	89.6	8.253	0.083	0.907	42.1	20.9
488	175	0.379	34.644	2355.	2261.	* 2270	* 505.5	31.4	2148.1	81.6	0.031	* 31.3	2148.4	81.3	9.452	0.024	0.026	33.7	12.4
489	221	0.537	34.670	2361.	2272.	* 2291	* 529.7	32.7	2160.1	79.2	0.014	* 32.6	2160.6	70.0	9.076	0.005	0.001	30.9	9.5
411	437	0.435	34.603	2364.	2269.	* 2201	* 505.0	31.3	2155.4	82.3	0.033	* 31.1	2156.3	81.6	9.654	0.015	0.029	31.9	10.0
412	530	0.306	34.603	2362.	2274.	* 2203	* 531.3	33.0	2162.3	78.7	0.013	* 32.7	2163.4	77.9	10.211	7.991	0.072	27.5	5.2
415	640	0.332	34.605	2366.	2275.	* 2295	* 520.3	32.4	2162.3	80.4	0.021	* 32.1	2163.5	79.4	10.100	7.995	0.007	28.0	5.5
416	740	0.203	34.600	2363.	2271.	* 2272	* 514.3	32.0	2150.2	80.0	0.025	* 31.7	2159.7	79.6	10.110	7.995	0.009	27.5	4.7
417	840	0.242	34.676	2365.	2270.	* 2200	* 503.0	31.4	2150.3	82.4	0.034	* 31.0	2157.9	81.0	9.994	0.000	0.024	20.0	4.9
410	950	0.200	34.670	2361.	2272.	* 2275	* 523.0	32.7	2160.0	79.3	0.017	* 32.3	2161.9	77.0	10.495	7.979	0.791	23.9	0.6
419	1059	0.130	34.673	2361.	2266.	* 2261	* 499.2	31.3	2152.5	82.2	0.036	* 30.0	2154.7	80.5	10.106	7.992	0.010	25.3	1.5
420	1259	0.052	34.670	2362.	2264.	* 2273	* 487.5	30.6	2149.6	83.0	0.046	* 30.1	2152.2	81.7	10.154	7.993	0.030	24.7	0.4
421	1459	-0.025	34.670	2363.	2260.	*	* 463.3	29.2	2143.3	87.5	0.066	* 28.6	2146.3	85.1	9.000	0.000	0.000	26.2	1.3
422	1659	-0.090	34.664	2363.	2259.	* 2261	* 464.7	29.4	2142.7	86.9	0.064	* 20.7	2146.1	84.2	10.096	7.996	0.053	23.4	-2.2
211	1809	-0.139	34.663	2364.	2248.	* 2235	* 426.3	27.0	2127.7	93.3	0.099	* 26.3	2131.5	90.2	9.419	0.026	0.916	20.3	2.4
423	1057	-0.163	34.662	2364.	2259.	* 2271	* 460.6	29.2	2142.3	87.5	0.060	* 20.5	2146.2	84.4	10.202	7.991	0.050	21.7	-4.5
212	2012	-0.192	34.659	2361.	2255.	* 2259	* 453.7	20.9	2130.2	87.9	0.071	* 20.1	2142.3	84.6	10.225	7.990	0.060	20.7	-5.9
424	2096	-0.211	34.661	2363.	2255.	* 2245	* 449.4	20.5	2137.5	89.0	0.077	* 27.7	2141.0	85.5	10.160	7.993	0.069	20.7	-6.1
201	2190	-0.240	34.661	2362.	2263.	* 2201	* 470.6	30.4	2140.2	84.3	0.052	* 29.6	2152.6	80.0	10.052	7.963	0.021	14.9	-12.2
215	2402	-0.270	34.657	2360.	2254.	* 2274	* 454.0	20.9	2137.2	87.9	0.072	* 20.0	2142.1	83.9	10.500	7.976	0.953	15.9	-12.0
202	2595	-0.310	34.654	2350.	2249.	* 2262	* 443.2	20.3	2131.3	89.4	0.001	* 27.3	2136.6	85.1	10.540	7.977	0.054	14.9	-13.6
216	2012	-0.330	34.654	2359.	2259.	* 2246	* 473.0	30.2	2144.0	84.0	0.056	* 29.1	2149.6	80.3	11.434	7.942	0.016	7.6	-21.6
203	2595	-0.355	34.654	2359.	2253.	* 2249	* 452.3	20.9	2136.3	87.0	0.073	* 27.7	2142.3	82.9	11.160	7.952	0.043	0.1	-21.0
217	3213	-0.369	34.652	2361.	2253.	*	* 452.9	20.9	2130.1	87.9	0.073	* 27.7	2144.6	82.7	11.395	7.943	0.040	5.1	-25.5
204	3295	-0.39	34.651	2361.	2253.	* 2260	* 445.6	20.5	2135.6	80.9	0.000	* 27.3	2142.3	83.5	11.314	7.946	0.040	4.9	-26.0
210	3413	-0.395	34.651	2362.	2252.	* 2266	* 439.0	20.1	2133.0	90.0	0.003	* 26.9	2140.0	84.3	11.296	7.947	0.057	4.3	-27.1
205	3494	-0.42	34.651	2359.	2250.	* 2251	* 442.0	20.3	2132.2	89.5	0.002	* 27.0	2139.3	83.7	11.453	7.941	0.050	2.6	-29.1
219	3613	-0.419	34.651	2360.	2250.	* 2259	* 439.3	20.1	2131.0	90.1	0.005	* 20.0	2139.2	84.0	11.512	7.939	0.054	1.4	-30.0
206	3695	-0.439	34.651	2361.	2240.	* 2235	* 429.0	27.6	2120.0	91.6	0.034	* 26.2	2136.4	85.4	11.364	7.944	0.067	1.6	-30.0
220	3062	-0.452	34.651	2355.	2249.	* 2230	* 430.2	20.1	2130.5	90.0	0.006	* 26.7	2130.0	83.5	11.764	7.929	0.040	-2.5	-35.6
207	3995	-0.471	34.650	2359.	2249.	* 2260	* 437.6	20.1	2131.0	89.9	0.006	* 26.6	2139.1	83.3	11.099	7.925	0.046	-4.7	-30.3
221	4171	-0.500	34.650	2350.	2244.	* 2256	* 424.9	27.3	2124.7	92.0	0.097	* 25.0	2133.2	85.0	11.770	7.920	0.063	-5.5	-39.0
209	4296	-0.516	34.650	2359.	2243.	* 2245	* 419.0	26.9	2122.9	93.1	0.103	* 25.4	2131.0	85.0	11.761	7.930	0.072	-6.5	-41.3
222	4501	-0.524	34.649	2359.	2244.	*	* 422.2	27.2	2124.2	92.7	0.100	* 25.5	2133.4	85.0	12.070	7.910	0.064	-10.4	-46.0
209	4697	-0.53	34.640	2350.	2250.	* 2253	* 442.0	20.5	2132.6	90.9	0.001	* 26.7	2142.1	91.1	12.000	7.890	0.024	-17.3	-53.0
223	4920	-0.512	34.647	2356.	2243.	* 2254	* 433.3	27.9	2126.7	90.4	0.009	* 26.1	2136.7	82.2	12.000	7.890	0.035	-19.0	-57.3
210	5099	-0.490	34.640	2359.	2247.	*	* 431.4	27.7	2120.2	91.0	0.092	* 25.9	2130.6	82.5	13.029	7.885	0.030	-22.5	-60.7
224	5305	-0.474	34.649	2357.	2245.	* 2253	* 431.2	27.7	2126.3	91.0	0.091	* 25.0	2137.1	82.1	13.200	7.877	0.034	-26.4	-65.5

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GEOSECS ATLANTIC STATION CAST DATE TIME DE LONGITUDE BOT DEPTH
 98 1 26 1 73 0704 56 23.7 S 4 38.7 E 4339
 98 3 26 1 73 1626 56 23.1 S 4 27.8 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8.008)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH.T=INSITU						CALC PARAMETERS P.T=INSITU			DELTA CO3= (CALC)	DELTA CO3= (ARAG)	
				TALK (M/KG) (E-6)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AM (E-9)	PH			ICP (E-6)
381	2	1.233	33.935	2388.	2138.	* 2198	* 293.2	17.7	1989.8	122.5	8.242	* 17.7	1989.8	122.5	5.735	8.241	1.215	76.2	59.4
383	4	1.233	33.831	2388.	2128.	* 2146	* 289.6	17.5	1986.8	123.7	8.246	* 17.5	1986.8	123.7	5.675	8.246	1.227	77.4	56.6
382	25	1.226	33.831	2389.	2144.	*	* 311.6	18.8	2007.8	117.4	8.219	* 18.8	2007.8	117.4	6.854	8.218	1.164	78.9	58.8
384	31	1.215	33.833	2398.	2138.	*	* 312.8	18.8	2002.5	116.6	8.217	* 18.8	2002.6	116.6	6.888	8.216	1.156	78.1	49.2
385	88	0.244	33.893	2389.	2136.	* 2152	* 286.2	17.9	1996.1	122.8	8.248	* 17.9	1996.3	121.8	5.691	8.245	1.218	74.9	53.9
386	115	-0.717	34.838	2316.	2183.	*	* 353.8	23.8	2059.4	101.6	8.164	* 23.8	2058.6	101.4	6.934	8.159	1.812	54.2	33.8
387	152	0.241	34.259	2322.	2213.	* 2216	* 437.6	27.4	2097.8	98.6	8.884	* 27.3	2097.3	98.4	8.359	8.878	0.888	48.9	19.7
388	181	0.748	34.392	2334.	2238.	*	* 467.4	28.7	2115.1	96.3	8.861	* 28.6	2115.4	96.8	8.827	8.854	0.867	38.3	17.8
389	214	1.324	34.515	2338.	2233.	* 2258	* 477.1	28.6	2117.5	96.9	8.856	* 28.5	2117.9	96.6	8.969	8.847	0.876	39.7	17.4
311	301	1.333	34.597	2348.	2252.	* 2253	* 513.4	38.7	2138.8	82.4	8.828	* 38.6	2139.4	82.8	9.633	8.816	0.831	33.5	11.9
312	367	1.488	34.641	2352.	2246.	*	* 481.5	28.6	2129.7	87.6	8.855	* 28.5	2138.5	87.8	9.114	8.848	0.884	38.8	16.3
315	652	1.343	34.783	2359.	2258.	* 2253	* 472.3	28.2	2132.3	89.5	8.863	* 28.8	2133.6	88.4	9.185	8.837	0.899	37.1	14.6
316	779	1.228	34.786	2363.	2254.	*	* 478.9	28.3	2136.2	89.5	8.864	* 28.8	2137.8	88.2	9.262	8.833	0.897	35.9	13.8
317	891	1.888	34.788	2362.	2259.	* 2246	* 488.8	29.5	2143.2	86.3	8.849	* 29.1	2145.8	84.9	9.688	8.814	0.863	31.6	8.4
318	988	0.949	34.788	2367.	2261.	*	* 477.6	29.8	2143.9	88.1	8.858	* 28.6	2145.9	86.5	9.578	8.819	0.879	32.4	9.8
319	1185	0.679	34.689	2366.	2268.	* 2254	* 472.3	29.8	2143.8	88.8	8.861	* 28.5	2145.4	86.1	9.681	8.814	0.875	38.2	6.2
320	1387	0.566	34.689	2367.	2263.	*	* 477.2	29.4	2146.6	87.8	8.857	* 28.9	2149.4	84.7	9.966	8.801	0.861	27.8	2.4
321	1588	0.439	34.684	2362.	2255.	* 2262	* 463.3	28.7	2137.9	88.4	8.867	* 28.1	2141.2	85.8	9.912	8.884	0.872	26.2	1.8
322	1778	0.318	34.678	2369.	2253.	*	* 435.1	27.1	2132.6	93.4	8.893	* 26.4	2136.2	90.4	9.585	8.822	0.919	28.9	3.1
181	1859	0.387	34.678	2362.	2262.	*	* 483.8	38.2	2147.8	84.8	8.849	* 29.4	2158.7	81.8	10.618	7.974	0.832	19.6	-6.5
323	1874	0.272	34.676	2363.	2257.	* 2267	* 463.9	28.9	2148.2	87.9	8.867	* 28.2	2144.8	84.8	10.283	7.991	0.862	22.4	-3.7
324	1969	0.238	34.675	2365.	2265.	*	* 484.6	38.3	2149.9	84.9	8.849	* 29.5	2153.8	81.7	10.715	7.978	0.831	18.4	-8.8
182	1997	0.248	34.675	2364.	2253.	*	* 448.1	28.8	2134.4	98.6	8.888	* 27.2	2138.5	87.3	9.995	8.888	0.887	23.6	-2.8
183	2197	0.144	34.671	2364.	2259.	* 2278	* 465.5	29.2	2142.4	87.4	8.865	* 28.3	2146.9	83.8	10.557	7.976	0.852	18.1	-9.8
184	2396	0.877	34.669	2366.	2262.	*	* 468.6	29.4	2145.6	87.8	8.862	* 28.5	2158.4	83.1	10.822	7.966	0.845	15.2	-12.5
185	2597	0.884	34.666	2364.	2258.	* 2298	* 468.3	29.8	2141.8	88.8	8.869	* 28.8	2146.2	83.8	10.863	7.964	0.851	13.7	-14.8
186	2796	-0.858	34.664	2364.	2261.	*	* 469.1	29.6	2144.9	96.5	8.861	* 28.5	2158.6	81.9	11.278	7.948	0.832	9.5	-19.6
187	2958	-0.896	34.662	2363.	2256.	* 2274	* 454.8	28.8	2138.7	88.5	8.873	* 27.6	2144.7	83.6	11.127	7.954	0.858	9.3	-28.4
188	3854	-0.123	34.668	2365.	2258.	*	* 455.8	28.8	2148.6	88.6	8.873	* 27.6	2146.8	83.5	11.226	7.958	0.849	8.1	-22.8
189	3152	-0.155	34.658	2363.	2249.	* 2264	* 431.9	27.4	2129.4	92.2	8.893	* 26.2	2135.9	86.9	10.885	7.966	0.883	10.2	-28.2
110	3288	-0.175	34.656	2363.	2253.	*	* 438.8	27.8	2134.1	91.1	8.888	* 26.6	2148.8	85.6	11.879	7.956	0.878	7.3	-23.6
111	3441	-0.258	34.656	2368.	2248.	* 2266	* 436.2	27.7	2129.3	91.8	8.889	* 26.4	2136.3	85.2	11.223	7.958	0.866	4.9	-26.5
115	3781	-0.235	34.656	2361.	2247.	* 2266	* 438.1	27.3	2127.5	92.1	8.894	* 26.8	2135.1	85.9	11.349	7.945	0.873	2.1	-38.3
116	3758	-0.242	34.654	2363.	2256.	*	* 452.2	28.8	2138.8	88.5	8.875	* 27.3	2146.3	82.3	11.938	7.923	0.836	-2.1	-34.7
117	3821	-0.248	34.654	2368.	2244.	* 2266	* 423.5	26.9	2123.9	93.2	8.188	* 25.6	2131.8	86.7	11.328	7.946	0.888	1.3	-31.6
118	3898	-0.252	34.654	2362.	2252.	*	* 442.2	28.1	2133.8	98.8	8.883	* 26.7	2141.8	83.6	11.852	7.926	0.849	-2.8	-33.9
119	3962	-0.252	34.653	2364.	2253.	* 2268	* 439.6	28.8	2134.4	98.6	8.886	* 26.5	2142.5	84.8	11.858	7.926	0.853	-3.3	-36.8
120	4828	-0.253	34.654	2362.	2253.	*	* 451.8	28.7	2137.8	88.5	8.875	* 27.2	2145.9	81.8	12.258	7.912	0.831	-6.4	-48.1
121	4896	-0.267	34.656	2362.	2242.	* 2265	* 412.1	26.2	2128.4	95.4	8.111	* 24.8	2128.9	88.3	11.316	7.946	0.897	-1.8	-34.9
122	4198	-0.382	34.654	2362.	2253.	*	* 444.3	28.3	2135.2	89.5	8.881	* 26.8	2143.7	82.5	12.268	7.912	0.838	-8.2	-42.6
123	4277	-0.327	34.654	2368.	2249.	* 2264	* 437.6	27.9	2138.5	98.6	8.887	* 26.4	2139.2	83.4	12.192	7.914	0.847	-8.5	-43.2
124	4321	-0.364	34.652	2362.	2258.	*	* 434.1	27.7	2131.2	91.1	8.898	* 26.2	2148.8	83.8	12.145	7.916	0.851	-8.7	-43.6

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 91 1 29 1 73 8453 49 34.3 S 11 28.8 E 4192
 91 4 29 1 73 1611 49 34.5 S 11 33.8 E
 91 6 29 1 73 2211 49 35.4 S 11 36.3 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*										DELTA CO3= (M/KG) (E-6)	DELTA CO3= (M/KG) (E-6)		
		TEMP. (C)	SAL. (0/00)	TALK (E-6)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AH (E-9)			PH	ICP (E-6)
401	2	4.302	33.841	2296.	2102.	* 1932	* 284.3	15.3	1949.4	137.3	8.263	* 15.3	1949.4	137.3	5.461	8.263	1.362	91.1	78.4
402	45	4.124	33.839	2293.	2105.	* 2097	* 291.8	15.8	1955.7	133.5	8.252	* 15.8	1955.8	133.4	5.626	8.256	1.323	86.9	66.1
403	70	4.053	33.842	2295.	2097.	*	* 274.3	14.9	1942.6	139.5	8.275	* 14.9	1942.8	139.3	5.340	8.272	1.382	92.6	71.7
404	130	2.844	33.896	2291.	2141.	* 2135	* 342.3	20.8	2010.3	118.7	8.183	* 20.8	2010.5	118.5	6.638	8.178	1.096	63.3	42.2
405	155	1.759	33.906	2294.	2130.	* 2138	* 310.8	18.3	1992.8	118.8	8.221	* 18.3	1993.2	118.5	6.180	8.215	1.178	71.2	58.8
406	179	1.734	33.931	2290.	2144.	* 2128	* 347.4	20.6	2015.1	109.3	8.176	* 20.5	2015.5	108.8	6.779	8.169	1.874	60.5	39.2
407	220	1.801	34.002	2301.	2172.	* 2162	* 396.5	23.3	2049.7	99.8	8.126	* 23.2	2050.1	98.6	7.634	8.117	0.985	50.7	29.3
408	314	1.932	34.269	2317.	2209.	* 2212	* 460.3	27.5	2093.5	80.1	8.063	* 27.3	2094.1	87.6	8.984	8.058	0.888	39.8	17.4
409	387	2.817	34.367	2325.	2231.	*	* 524.5	30.6	2119.3	81.8	8.019	* 30.5	2120.1	88.4	9.913	8.004	0.810	31.3	9.5
410	466	2.005	34.447	2334.	2238.	* 2252	* 521.6	30.4	2125.4	82.2	8.023	* 30.2	2126.4	81.4	9.916	8.004	0.822	31.5	9.5
411	500	2.025	34.498	2340.	2250.	* 2244	* 547.1	31.9	2138.7	79.3	8.004	* 31.7	2139.9	78.5	10.446	7.981	0.793	27.7	5.4
412	600	2.166	34.554	2344.	2249.	* 2264	* 531.6	30.8	2136.3	81.9	8.017	* 30.6	2137.6	80.8	10.239	7.990	0.819	29.3	6.8
415	746	2.170	34.592	2347.	2251.	* 2261	* 529.3	30.7	2137.8	82.5	8.019	* 30.4	2139.3	81.3	10.242	7.990	0.825	29.4	6.7
416	790	2.174	34.605	2348.	2257.	*	* 557.5	32.3	2145.7	78.9	7.998	* 32.8	2147.3	77.7	10.883	7.966	0.789	25.4	2.5
417	896	2.161	34.636	2352.	2245.	* 2262	* 490.8	28.5	2120.2	88.3	8.058	* 28.1	2136.0	86.8	9.674	8.014	0.882	33.6	18.5
418	1059	2.153	34.694	2356.	2246.	* 2271	* 481.9	27.9	2120.1	89.9	8.050	* 27.5	2130.4	88.1	9.678	8.014	0.896	33.2	9.5
419	1300	2.079	34.731	2357.	2243.	* 2257	* 467.4	27.2	2123.9	92.8	8.076	* 26.7	2126.5	89.8	9.596	8.018	0.914	33.1	8.9
420	1500	1.950	34.740	2366.	2234.	*	* 429.2	25.1	2110.4	96.5	8.183	* 24.5	2113.6	93.9	9.035	8.044	0.977	37.4	12.6
421	1570	1.915	34.751	2358.	2234.	* 2254	* 434.7	25.4	2111.1	97.5	8.097	* 24.9	2114.4	94.6	9.212	8.036	0.965	35.6	10.6
101	1660	1.803	34.746	2359.	2248.	* 2254	* 473.8	27.8	2129.7	90.5	8.063	* 27.2	2133.1	87.7	10.065	7.997	0.893	27.6	2.3
422	1700	1.746	34.759	2360.	2242.	* 2199	* 450.9	26.5	2121.2	94.2	8.083	* 25.9	2124.7	91.4	9.639	8.016	0.930	31.0	5.6
102	1774	1.694	34.741	2361.	2244.	* 2248	* 452.8	26.7	2123.6	93.7	8.081	* 26.1	2127.2	96.7	9.752	8.011	0.924	29.6	4.0
423	1799	1.620	34.736	2362.	2256.	*	* 466.2	27.7	2131.2	91.1	8.068	* 27.0	2134.9	88.1	10.081	7.996	0.897	26.7	1.0
103	1803	1.579	34.738	2364.	2246.	*	* 440.6	26.6	2125.1	94.3	8.095	* 25.9	2129.0	91.1	9.764	8.010	0.928	28.9	3.8
424	2000	1.437	34.726	2366.	2251.	* 2260	* 456.6	27.2	2131.0	92.8	8.078	* 26.5	2135.1	89.5	10.038	7.998	0.911	26.1	-0.3
104	2035	1.416	34.727	2366.	2251.	* 2262	* 455.7	27.2	2131.1	92.7	8.078	* 26.4	2135.3	89.3	10.054	7.998	0.909	25.6	-0.9
105	2153	1.271	34.721	2367.	2254.	* 2255	* 460.2	27.6	2134.7	91.7	8.074	* 26.8	2139.1	88.1	10.306	7.987	0.897	22.7	-4.3
106	2339	1.189	34.721	2363.	2263.	* 2263	* 502.3	30.2	2147.9	84.9	8.038	* 29.3	2152.6	81.2	11.357	7.945	0.826	14.2	-13.2
107	2493	1.000	34.714	2369.	2252.	* 2260	* 444.3	26.0	2131.3	93.8	8.080	* 25.9	2136.5	89.6	10.269	7.988	0.912	21.0	-6.9
108	2640	0.975	34.710	2367.	2259.	*	* 471.8	26.6	2141.4	89.0	8.064	* 27.6	2146.7	84.7	11.006	7.958	0.862	14.4	-14.8
109	2709	0.859	34.699	2370.	2252.	* 2271	* 437.7	26.7	2130.9	94.4	8.093	* 25.7	2136.7	89.6	10.420	7.982	0.912	17.7	-11.3
110	2835	0.854	34.700	2371.	2259.	* 2267	* 457.2	27.9	2139.6	91.3	8.076	* 26.8	2145.6	86.6	10.901	7.963	0.801	14.1	-15.0
111	2901	0.800	34.699	2372.	2259.	* 2274	* 453.6	27.7	2139.5	91.9	8.079	* 26.6	2145.5	86.9	10.960	7.960	0.804	12.7	-17.0
112	3074	0.793	34.696	2368.	2259.	* 2261	* 463.4	28.4	2140.9	89.7	8.060	* 27.3	2147.1	84.6	11.352	7.945	0.861	9.3	-20.6
115	3105	0.750	34.693	2373.	2254.	* 2269	* 433.7	26.5	2132.5	95.0	8.097	* 25.4	2139.1	89.6	10.724	7.970	0.911	12.9	-17.5
116	3270	0.702	34.690	2369.	2264.	* 2260	* 477.1	29.2	2147.2	87.6	8.050	* 28.0	2153.0	82.3	11.045	7.926	0.836	4.4	-26.3
117	3371	0.679	34.689	2373.	2265.	* 2257	* 467.6	29.7	2147.1	89.2	8.067	* 27.4	2153.9	83.7	11.710	7.931	0.851	4.7	-26.3
110	3460	0.647	34.686	2371.	2266.	*	* 450.6	29.1	2141.2	90.0	8.075	* 26.6	2140.2	83.0	11.575	7.936	0.864	4.8	-26.6
119	3610	0.611	34.685	2372.	2264.	*	* 468.3	29.7	2146.1	89.2	8.067	* 27.3	2153.4	83.3	11.957	7.922	0.847	1.2	-30.7
120	3761	0.562	34.684	2373.	2262.	* 2256	* 455.6	28.1	2143.1	90.8	8.076	* 25.7	2150.6	84.5	11.868	7.926	0.859	0.4	-32.1
121	3860	0.527	34.681	2375.	2257.	* 2271	* 433.6	26.6	2135.7	94.5	8.096	* 25.4	2143.7	87.9	11.433	7.942	0.894	2.9	-30.4
122	3962	0.512	34.681	2371.	2259.	* 2255	* 451.3	27.9	2139.8	91.3	8.080	* 26.4	2147.9	84.7	12.003	7.921	0.861	-2.2	-35.4
123	4059	0.507	34.679	2372.	2260.	* 2262	* 451.8	27.9	2140.7	91.4	8.079	* 26.4	2149.6	84.6	12.120	7.916	0.860	-3.6	-37.3
124	4162	0.507	34.678	2373.	2256.	* 2263	* 436.2	26.9	2135.0	94.0	8.093	* 25.4	2143.6	87.8	11.839	7.927	0.884	-2.7	-36.8

GEOSCOPE ATLANTIC STATION CAST DATE LATITUDE LONGITUDE BOT DEPTH
 92 1 31 1 73 46 11.8 S 14 36.9 E 4553
 92 3 31 1 73 0731 46 14.8 S 14 35.4 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (MG/KG)	TIT (MG/KG)	GC TC02 (E-6)	CALC PARAMETERS P=1ATM.T=INSITU				CALC PARAMETERS P,T=INSITU				DELTA CO3 (CALC) (MG/KG)	DELTA CO3 (ARAG) (MG/KG)			
							PCO2 (ATM) (E-6)	H2CO3 (MG/KG) (E-6)	HC03- (MG/KG) (E-6)	CO3- (MG/KG) (E-6)	PH	H2CO3 (MG/KG) (E-6)	HC03- (MG/KG) (E-6)	CO3- (MG/KG) (E-6)			PH	ICP (E-6)	
381	2	7.376	33.824	2278.	2873.	* 2964	* 389.4	14.9	1918.7	139.4	0.236	* 14.9	1918.7	139.4	5.883	0.236	1.382	93.4	72.7
382	12	7.378	33.823	2275.	2879.	*	* 312.4	15.1	1923.8	138.9	0.234	* 15.1	1923.8	138.9	5.846	0.233	1.377	92.8	72.1
383	91	6.845	33.847	2273.	2886.	*	* 312.8	15.8	1937.3	132.9	0.229	* 15.8	1937.3	132.7	5.943	0.226	1.317	86.8	65.1
384	189	4.882	33.987	2273.	2183.	*	* 328.1	17.3	1962.1	123.7	0.206	* 17.3	1962.3	123.3	6.275	0.202	1.227	76.6	55.6
386	171	4.398	34.112	2286.	2121.	* 2134	* 348.8	18.3	1983.2	119.5	0.191	* 18.2	1983.6	119.2	6.534	0.185	1.192	71.8	58.7
387	288	4.162	34.132	2279.	2127.	* 2137	* 365.4	19.7	1995.6	111.7	0.162	* 19.7	1996.8	111.3	7.087	0.154	1.114	63.7	42.4
388	271	3.819	34.141	2293.	2144.	*	* 371.5	20.3	2013.4	118.3	0.157	* 20.2	2014.8	109.8	7.132	0.147	1.099	61.6	40.2
389	341	3.459	34.152	2292.	2153.	* 2168	* 391.5	21.7	2026.8	104.5	0.135	* 21.6	2027.5	103.9	7.558	0.122	1.048	55.2	33.6
318	442	3.861	34.178	2289.	2178.	*	* 415.4	23.4	2047.5	99.1	0.112	* 23.2	2048.4	98.4	8.045	0.094	0.985	48.9	27.8
311	548	2.819	34.211	2387.	2174.	* 2187	* 482.9	22.9	2049.7	101.5	0.124	* 22.7	2050.8	108.5	7.898	0.103	1.088	50.3	28.1
312	648	2.578	34.256	2316.	2198.	*	* 448.1	25.5	2079.1	93.4	0.085	* 25.3	2088.4	92.3	8.721	0.059	0.927	41.3	18.9
315	731	2.417	34.318	2323.	2217.	*	* 486.5	28.8	2101.8	87.2	0.051	* 27.7	2103.3	86.8	9.538	0.021	0.856	34.1	11.3
316	848	2.361	34.364	2327.	2227.	*	* 588.6	29.3	2113.5	84.1	0.033	* 29.8	2115.2	82.8	10.888	0.008	0.834	38.8	7.1
317	947	2.325	34.438	2333.	2235.	* 2248	* 518.3	29.9	2121.8	83.2	0.026	* 29.5	2123.7	81.8	10.261	0.989	0.825	28.2	4.9
318	1849	2.365	34.498	2339.	2243.	*	* 529.7	38.5	2138.1	82.4	0.019	* 38.1	2132.2	88.7	18.543	0.977	0.817	26.3	2.8
319	1133	2.557	34.262	2343.	2234.	* 2245	* 487.2	27.9	2117.8	89.2	0.053	* 27.4	2119.2	87.3	9.887	0.888	0.885	32.2	8.4
320	1278	2.468	34.599	2346.	2237.	*	* 487.1	27.9	2119.8	89.2	0.053	* 27.4	2122.4	87.2	9.934	0.883	0.884	38.7	6.6
321	1471	2.579	34.691	2349.	2238.	* 2243	* 484.1	27.6	2128.1	98.3	0.056	* 27.1	2123.8	87.9	10.838	0.998	0.894	29.8	5.1
322	1653	2.548	34.721	2353.	2233.	*	* 455.5	26.8	2111.8	95.2	0.081	* 25.5	2115.8	92.5	9.537	0.818	0.942	35.2	8.1
323	1881	2.454	34.751	2352.	2234.	* 2249	* 468.2	26.4	2113.5	94.1	0.076	* 25.7	2117.2	91.1	9.888	0.885	0.928	29.8	4.2
181	1831	2.344	34.743	2354.	2233.	*	* 449.7	25.9	2111.3	95.8	0.085	* 25.2	2115.1	92.7	9.782	0.813	0.944	31.2	5.4
182	1979	2.258	34.751	2354.	2235.	* 2256	* 454.3	25.2	2114.7	94.7	0.081	* 25.5	2118.1	91.3	9.936	0.883	0.938	28.3	2.2
324	1999	2.258	34.781	2357.	2238.	*	* 455.3	26.3	2117.8	94.7	0.088	* 25.6	2121.1	91.3	9.962	0.882	0.931	28.2	1.9
183	2083	2.224	34.778	2355.	2238.	* 2224	* 435.8	25.2	2106.9	97.9	0.097	* 24.5	2111.2	94.3	9.657	0.815	0.961	38.3	3.8
184	2187	2.214	34.781	2352.	2231.	* 2234	* 447.4	25.9	2109.4	95.7	0.086	* 25.1	2113.9	92.8	10.881	0.888	0.938	26.9	8.1
185	2337	2.138	34.783	2357.	2238.	*	* 429.5	24.9	2106.8	99.1	0.183	* 24.1	2118.9	95.8	9.754	0.811	0.969	28.4	1.1
186	2467	2.837	34.798	2358.	2231.	*	* 427.9	24.9	2107.1	99.8	0.184	* 24.1	2112.2	94.8	9.842	0.887	0.966	26.7	-1.8
187	2556	1.994	34.789	2357.	2226.	*	* 415.3	24.2	2108.6	181.2	0.115	* 23.4	2196.8	96.7	9.664	0.815	0.986	27.7	-8.4
188	2641	1.924	34.781	2351.	2231.	* 2229	* 418.1	24.4	2105.8	188.7	0.113	* 23.6	2111.3	96.1	9.791	0.889	0.988	26.1	-2.2
118	2891	1.698	34.764	2363.	2244.	* 2242	* 447.4	26.4	2122.8	94.8	0.086	* 25.4	2128.7	89.9	10.678	0.972	0.916	17.1	-12.1
111	3892	1.528	34.751	2365.	2245.	*	* 442.1	26.3	2123.3	95.4	0.091	* 25.2	2129.7	98.2	10.768	0.968	0.918	14.9	-15.8
112	3191	1.459	34.744	2367.	2251.	* 2232	* 453.9	27.8	2138.7	93.3	0.088	* 25.9	2137.2	87.9	11.131	0.953	0.896	11.5	-18.7
116	3453	1.318	34.738	2369.	2254.	* 2243	* 455.3	27.2	2133.9	92.9	0.079	* 26.8	2148.9	87.1	11.445	0.941	0.886	7.3	-23.9
117	3552	1.219	34.728	2368.	2257.	*	* 463.4	28.8	2138.5	98.6	0.078	* 26.7	2145.6	84.7	11.885	0.928	0.862	3.7	-27.9
118	3681	1.119	34.715	2367.	2268.	* 2251	* 585.5	38.5	2153.1	84.4	0.036	* 29.1	2168.3	78.6	12.938	0.888	0.888	-4.2	-36.2
119	3858	0.988	34.784	2374.	2255.	*	* 438.3	26.6	2133.3	95.1	0.093	* 25.2	2141.3	88.5	11.482	0.948	0.901	3.5	-29.3
120	4851	0.854	34.694	2375.	2263.	* 2244	* 458.4	27.9	2143.7	91.4	0.075	* 26.4	2151.9	84.7	12.218	0.913	0.861	-3.2	-36.7
122	4388	0.722	34.688	2376.	2271.	* 2247	* 479.2	29.4	2153.9	87.7	0.058	* 27.7	2162.5	88.7	13.841	0.885	0.821	-18.8	-45.3
123	4348	0.679	34.684	2372.	2264.	*	* 467.8	29.7	2146.2	89.2	0.067	* 27.8	2154.9	82.8	12.816	0.892	0.834	-18.2	-44.9
124	4498	0.611	34.688	2373.	2261.	* 2258	* 453.3	27.9	2141.8	91.3	0.079	* 26.2	2158.9	83.8	12.644	0.898	0.852	-18.7	-46.8

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 93 1 2 2 73 0854 41 46.1 9 18 27.2 E 4953
 93 4 2 2 73 1200 41 46.4 9 19 26.0 E
 93 6 2 2 73 1930 41 49.7 9 18 23.8 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (M/KG)	TIT (E-6)	*GC		*CALC PARAMETERS P=IATH.T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3- (M/KG)	DELTA CO3- (M/KG)	
						TC02 (M/KG)	TC02 (E-6)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM (E-9)	PH			ICP (E-6)
411	144	12.018	34.984	2317.	2073.	* 2101	*	309.8	12.7	1089.5	170.8	8.253	* 12.7	1089.8	170.5	5.631	8.240	1.740	123.7	102.0
412	107	11.324	34.910	2314.	2090.	* 2070	*	340.8	14.7	1930.4	153.0	8.207	* 14.6	1930.8	152.6	6.307	8.200	1.561	105.5	84.5
615	246	10.24	34.732	2306.	2096.	* 2100	*	322.3	14.1	1917.1	154.9	8.232	* 14.0	1917.7	154.3	5.978	8.223	1.571	106.8	85.6
616	314	10.12	34.774	2300.	2109.	* 2121	*	362.3	15.9	1951.2	141.9	8.108	* 15.8	1951.9	141.3	6.653	8.177	1.440	93.3	71.9
617	304	9.13	34.652	2305.	2104.	* 2132	*	341.8	15.5	1945.8	142.7	8.207	* 15.4	1946.7	142.0	6.411	8.193	1.442	93.4	71.0
618	443	7.971	34.522	2302.	2129.	* 2138	*	302.7	18.0	1995.5	123.4	8.161	* 17.9	1996.5	124.6	7.177	8.144	1.261	75.5	53.0
620	642	5.66	34.391	2309.	2166.	* 2185	*	423.4	21.6	2036.7	107.6	8.115	* 21.4	2038.1	106.5	8.110	8.091	1.074	53.7	33.4
621	745	4.60	34.329	2309.	2167.	* 2199	*	400.2	21.7	2030.5	106.9	8.125	* 21.4	2040.0	105.5	8.001	8.097	1.062	53.0	31.2
622	797	4.4	34.343	2311.	2100.	* 2199	*	462.0	24.7	2067.0	96.3	8.077	* 24.4	2068.6	95.0	9.001	8.046	0.956	42.9	20.1
415	900	4.171	34.407	2323.	2197.	* 2204	*	452.1	24.4	2074.6	98.1	8.086	* 24.1	2076.4	96.6	8.086	8.051	0.974	43.6	20.6
416	597	3.037	34.439	2332.	2225.	* 2230	*	513.7	20.0	2100.9	80.0	8.036	* 27.7	2110.9	86.5	10.071	7.997	0.873	32.6	9.3
417	1070	3.300	34.436	2333.	2222.	* 2242	*	491.3	27.3	2104.6	90.2	8.052	* 26.9	2106.7	89.4	9.774	8.010	0.893	33.9	10.4
410	1197	3.103	34.507	2342.	2244.	*	*	539.6	30.1	2130.3	83.6	8.015	* 29.7	2132.6	81.7	10.767	7.960	0.827	26.1	2.2
419	1347	3.024	34.504	2352.	2249.	* 2257	*	521.2	29.3	2133.4	86.3	8.030	* 28.8	2136.0	84.2	10.553	7.977	0.854	27.3	3.0
420	1446	2.931	34.620	2353.	2251.	* 2264	*	523.4	29.5	2135.8	85.7	8.020	* 28.9	2138.6	83.5	10.697	7.971	0.847	25.6	1.0
421	1599	2.770	34.679	2350.	2244.	* 2211	*	505.0	20.7	2127.5	87.8	8.040	* 20.1	2130.7	85.2	10.549	7.977	0.866	26.0	1.0
422	1744	2.725	34.730	2352.	2237.	*	*	474.6	26.9	2117.6	92.5	8.063	* 26.3	2121.1	89.6	10.079	7.997	0.912	29.0	3.6
423	1891	2.691	34.767	2351.	2229.	*	*	451.6	25.7	2107.1	96.2	8.004	* 25.0	2111.0	93.0	9.771	8.010	0.940	31.0	5.1
101	1993	2.664	34.700	2350.	2230.	* 2230	*	457.1	26.0	2100.9	95.1	8.079	* 25.3	2113.0	91.7	9.901	8.001	0.935	20.7	2.5
102	2143	2.615	34.803	2352.	2223.	* 2217	*	429.6	24.5	2090.5	100.0	8.104	* 23.7	2103.0	96.3	9.556	8.020	0.982	31.7	5.1
424	2192	2.599	34.800	2351.	2224.	* 2201	*	435.5	24.0	2100.2	90.9	8.090	* 24.1	2104.0	95.2	9.726	8.012	0.971	30.1	3.3
103	2292	2.562	34.812	2351.	2217.	* 2211	*	414.5	23.7	2090.6	102.7	8.117	* 22.9	2093.4	90.7	9.306	8.020	1.007	32.6	5.5
104	2443	2.402	34.020	2352.	2215.	* 2225	*	405.5	23.2	2087.4	104.4	8.126	* 22.4	2092.5	100.1	9.331	8.030	1.021	32.4	4.0
105	2591	2.406	34.021	2352.	2221.	* 2225	*	421.2	24.2	2095.7	101.1	8.110	* 23.3	2101.1	96.6	9.000	8.009	0.906	27.3	-0.7
106	2742	2.354	34.024	2352.	2225.	* 2205	*	432.0	24.0	2101.2	98.9	8.100	* 23.9	2106.9	94.2	10.175	7.992	0.962	23.3	-5.3
107	2891	2.299	34.025	2357.	2209.	* 2223	*	376.1	21.7	2076.6	110.0	8.155	* 20.0	2082.0	105.4	9.077	8.042	1.076	32.0	3.7
100	3011	2.222	34.021	2359.	2222.	* 2220	*	403.5	23.3	2094.1	104.6	8.120	* 22.3	2100.5	99.2	9.700	8.010	1.012	25.2	-4.3
109	3127	2.123	34.010	2359.	2227.	* 2211	*	415.6	24.1	2101.1	101.0	8.116	* 23.1	2107.6	96.3	10.166	7.993	0.903	20.9	-9.0
111	3241	2.106	34.016	2362.	2217.	* 2197	*	301.6	22.2	2083.7	109.1	8.190	* 21.1	2092.7	103.1	9.492	8.023	1.052	26.3	-3.9
112	3341	2.022	34.010	2360.	2246.	* 2218	*	460.7	27.3	2126.6	92.1	8.060	* 26.1	2133.4	86.5	11.509	7.936	0.003	8.5	-22.1
115	3449	1.916	34.000	2366.	2220.	* 2235	*	397.6	23.2	2099.5	105.3	8.134	* 22.1	2106.0	99.0	10.046	7.990	1.010	19.6	-11.4
116	3569	1.797	34.707	2367.	2236.	* 2210	*	415.2	24.4	2110.1	101.5	8.116	* 23.2	2117.6	95.2	10.579	7.976	0.970	14.2	-17.3
117	3640	1.606	34.777	2360.	2230.	* 2232	*	416.6	24.6	2112.5	101.0	8.115	* 23.4	2120.1	94.5	10.690	7.971	0.964	12.5	-19.3
118	3700	1.503	34.763	2371.	2245.	* 2250	*	426.7	25.3	2121.0	90.0	8.106	* 24.0	2120.7	92.3	10.993	7.959	0.941	9.4	-22.6
119	3796	1.400	34.753	2370.	2249.	* 2231	*	439.7	26.2	2126.0	96.1	8.093	* 24.0	2134.6	89.6	11.414	7.943	0.913	5.5	-26.9
120	3947	1.300	34.740	2372.	2250.	* 2257	*	465.6	27.9	2140.0	91.3	8.070	* 26.4	2140.0	84.0	12.220	7.913	0.863	-1.4	-34.4
121	4096	1.100	34.731	2375.	2256.	* 2251	*	442.0	26.6	2134.3	95.1	8.091	* 25.1	2142.7	80.1	11.007	7.920	0.897	-0.2	-33.0
122	4245	1.060	34.721	2370.	2250.	* 2242	*	443.4	26.0	2130.6	94.6	8.090	* 25.3	2147.3	87.4	12.000	7.921	0.889	-3.2	-37.4
123	4395	0.937	34.711	2370.	2243.	* 2250	*	393.6	23.9	2115.1	104.0	8.136	* 22.5	2124.5	96.0	10.920	7.962	0.977	3.2	-31.6
124	4495	0.865	34.700	2301.	2251.	* 2265	*	400.6	24.0	2125.0	101.2	8.124	* 23.2	2134.5	93.2	11.351	7.945	0.949	-1.1	-36.3

I FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS				CALC PARAMETERS P-LATH, T-INSITU*				CALC PARAMETERS P, T-INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARAG) (M/KG)			
			SAL. (8/28)	TALK (EQ/KG)	TC02 (M/KG)	GC TC02 (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3- (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3- (M/KG)			PH	PH	ICP (E-6)
681	6	22.27	35.733	2351.	2816.	* 2841	* 323.6	9.0	1778.3	235.9	0.266	* 9.0	1778.3	235.0	5.425	0.266	2.472	190.5	170.2
682	46	28.59	35.672	2344.	2884.	* 291.0	* 291.0	9.3	1756.8	238.0	0.297	* 9.3	1756.9	237.0	5.862	0.296	2.487	192.2	171.7
683	73	18.23	35.541	2334.	2813.	* 2833	* 284.2	9.7	1779.5	223.0	0.308	* 9.6	1779.7	223.6	5.841	0.298	2.338	177.7	157.1
684	193	15.66	35.467	2331.	2846.	*	* 381.2	11.0	1836.1	198.9	0.273	* 11.0	1836.6	198.4	5.415	0.266	2.863	151.6	138.7
685	228	15.47	35.457	2333.	2848.	* 2888	* 299.3	11.8	1838.1	198.9	0.273	* 11.8	1838.7	198.3	5.484	0.267	2.861	151.2	138.3
686	363	13.72	35.271	2329.	2885.	*	* 339.3	13.2	1988.8	171.0	0.225	* 13.1	1988.0	171.0	6.133	0.212	1.769	123.0	181.6
687	553	18.98	34.945	2313.	2898.	* 2136	* 346.0	14.7	1931.1	152.2	0.208	* 14.6	1932.4	151.0	6.478	0.189	1.947	181.3	79.5
688	723	7.54	34.569	2386.	2131.	*	* 373.1	17.8	1986.6	126.5	0.169	* 17.6	1988.2	123.2	7.287	0.142	1.268	73.9	51.5
689	882	5.78	34.481	2388.	2152.	* 2188	* 488.0	28.0	2821.0	118.2	0.127	* 28.6	2822.7	188.0	7.999	0.897	1.897	56.7	34.1
618	893	4.85	34.335	2299.	2178.	*	* 472.8	24.9	2858.1	95.0	0.867	* 24.6	2859.9	93.6	9.274	0.833	0.942	48.7	17.7
612	1893	3.58	34.348	2313.	2197.	*	* 478.2	25.9	2879.7	92.4	0.867	* 25.5	2888.9	98.6	9.459	0.824	0.912	35.9	12.4
616	1298	3.88	34.475	2329.	2233.	*	* 548.5	38.3	2128.5	82.2	0.812	* 29.8	2123.8	88.2	18.941	7.961	0.811	23.8	-8.4
617	1388	2.95	34.523	2335.	2234.	* 2263	* 521.2	29.4	2119.8	84.9	0.827	* 29.8	2122.4	82.7	18.667	7.972	0.837	25.4	1.8
618	1487	2.95	34.685	2336.	2243.	*	* 554.8	31.2	2131.8	88.0	0.882	* 38.6	2133.9	78.5	11.393	7.943	0.797	28.3	-4.4
628	1688	2.96	34.728	2341.	2238.	*	* 488.8	27.5	2112.4	98.1	0.853	* 26.9	2115.7	87.4	18.324	7.986	0.889	27.3	2.1
621	1787	2.92	34.762	2337.	2224.	* 2251	* 488.9	27.1	2185.8	91.1	0.858	* 26.4	2189.4	88.2	18.287	7.988	0.899	27.2	1.7
581	1884	2.97	34.774	2342.	2219.	*	* 458.9	25.4	2897.8	96.6	0.884	* 24.7	2188.7	93.5	9.689	0.814	0.954	32.4	6.8
622	1887	2.9 1	34.791	2339.	2219.	*	* 458.4	25.8	2898.3	94.9	0.877	* 25.2	2182.1	91.7	9.931	0.883	0.935	29.8	3.9
623	1988	2.91	34.818	2336.	2284.	* 2237	* 421.3	23.7	2879.8	181.3	0.118	* 23.1	2883.1	97.8	9.298	0.832	0.998	34.9	8.7
624	1998	2.91	34.818	2337.	2218.	*	* 436.2	24.6	2888.9	98.5	0.896	* 23.9	2891.8	95.1	9.594	0.818	0.971	32.1	5.9
582	2185	2.86	34.834	2348.	2218.	* 2241	* 452.8	25.5	2896.6	95.9	0.883	* 24.8	2188.9	92.4	18.882	8.888	0.943	28.3	1.8
583	2487	2.78	34.848	2348.	2199.	* 2236	* 381.3	21.6	2867.5	189.9	0.145	* 28.9	2872.7	185.4	8.799	8.856	1.877	38.2	18.8
584	2687	2.61	34.862	2345.	2285.	*	* 398.8	22.7	2876.4	185.9	0.132	* 21.8	2881.9	181.2	9.329	8.838	1.834	31.9	3.8
585	2888	2.51	34.868	2347.	2285.	*	* 392.8	22.4	2875.5	187.1	0.138	* 21.5	2881.5	182.8	9.373	8.828	1.842	38.4	1.7
587	3218	2.34	34.858	2354.	2211.	*	* 388.4	22.3	2888.9	187.8	0.142	* 21.3	2887.8	181.9	9.638	8.816	1.841	25.6	-4.5
588	3462	2.31	34.859	2355.	2224.	* 2243	* 429.6	24.2	2898.6	181.1	0.111	* 23.1	2185.9	95.8	18.595	7.975	0.971	15.7	-15.3
589	3713	2.11	34.848	2382.	2221.	* 2258	* 392.8	22.8	2891.4	186.8	0.139	* 21.6	2899.4	188.1	18.156	7.993	1.822	17.4	-14.5
518	3964	1.78	34.798	2363.	2242.	*	* 443.4	26.1	2128.8	95.9	0.898	* 24.7	2128.1	89.2	11.679	7.933	0.918	3.8	-29.9
511	4216	1.35	34.739	2374.	2245.	*	* 415.3	24.8	2119.7	188.5	0.116	* 23.4	2128.5	93.1	11.253	7.948	0.948	3.1	-38.9
512	4366	1.23	34.745	2375.	2248.	*	* 419.1	25.2	2123.4	99.4	0.112	* 23.7	2132.6	91.8	11.517	7.939	0.933	-8.4	-35.8
515	4568	1.14	34.739	2376.	2262.	* 2288	* 457.8	27.5	2142.1	92.4	0.878	* 25.9	2151.4	84.7	12.724	7.895	0.863	-18.5	-45.9
516	4618	1.13	34.737	2379.	2257.	* 2274	* 453.2	26.1	2134.1	96.8	0.899	* 24.5	2143.6	88.8	12.158	7.915	0.985	-7.1	-42.8
518	4729	1.13	34.736	2388.	2268.	* 2278	* 439.8	26.5	2137.7	95.8	0.894	* 24.9	2147.4	87.7	12.443	7.985	0.893	-18.8	-46.1
528	4878	1.12	34.734	2378.	2263.	*	* 454.3	27.4	2142.6	93.8	0.881	* 25.7	2152.5	84.8	13.887	7.886	0.864	-15.8	-51.7
522	4988	1.11	34.734	2388.	2267.	*	* 481.1	27.8	2147.2	92.8	0.875	* 26.1	2157.1	83.8	13.217	7.879	0.854	-16.5	-53.3
524	4921	1.116	34.734	2379.	2267.	*	* 464.4	28.8	2147.5	91.5	0.872	* 26.2	2157.5	83.3	13.335	7.875	0.848	-17.4	-54.3

[FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

10

10

CARBONATE REPORT

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 183 3 17 2 73 1051 23 59.9 S 8 29.4 E 4668
 183 6 17 2 73 2215 24 0.8 S 8 27.7 E 4634

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS					*CALC PARAMETERS P=LATH.T=INSITU*					CALC PARAMETERS P,T=INSITU										
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (20/00)	TALK (EG/KG)	TIT (M/KG)	* GC TC02 *(E-6)	* TC02 *(E-6)	* PCO2 (ATM) (M/KG) (E-6)	* H2CO3 (M/KG) (E-6)	* HCO3- (M/KG) (E-6)	* CO3= (M/KG) (E-6)	PH	* H2CO3 (M/KG) (E-6)	* HCO3- (M/KG) (E-6)	* CO3= (M/KG) (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG) (E-6)	DELTA CO3= (CRAG) (M/KG) (E-6)
601	5	23.42	35.591	2388.	2837.	* 2845	* 359.7	10.6	1797.3	229.1	0.234	* 10.6	1797.3	229.1	5.037	0.234	2.390	183.0	163.4	
602	14	23.28	35.598	2356.	2831.	* 2849	* 353.4	10.5	1798.3	230.3	0.239	* 10.5	1798.3	230.2	5.773	0.239	2.482	184.9	164.5	
603	29	22.48	35.699	2359.	2829.	* 2847	* 336.0	10.1	1795.0	233.1	0.255	* 10.1	1795.0	233.0	5.575	0.254	2.439	187.6	167.2	
606	102	15.85	35.484	2341.	2862.	* 2888	* 315.7	11.5	1855.0	195.5	0.250	* 11.5	1855.3	195.2	5.564	0.255	2.831	149.0	128.3	
607	132	15.42	35.464	2348.	2869.	* 2894	* 322.4	11.9	1867.0	198.1	0.249	* 11.9	1867.3	199.0	5.692	0.245	1.974	143.4	122.6	
608	173	13.70	35.221	2331.	2882.	* 2116	* 331.3	12.9	1894.0	175.1	0.235	* 12.0	1894.4	174.7	5.988	0.229	1.004	127.9	107.0	
609	224	12.48	35.069	2328.	2117.	* 2143	* 396.0	10.1	1955.2	145.7	0.162	* 16.1	1955.7	145.2	7.011	0.154	1.493	98.0	76.9	
610	295	11.27	34.968	2315.	2148.	* 2160	* 465.7	19.6	2084.9	123.5	0.097	* 19.5	2085.5	123.0	8.106	0.087	1.268	73.2	54.8	
611	364	9.35	34.767	2311.	2187.	* 2216	* 565.0	25.4	2063.5	98.2	0.015	* 25.2	2084.2	97.6	9.961	0.082	0.995	49.2	27.7	
612	453	7.01	34.628	2388.	2218.	* 2248	* 664.5	31.5	2183.0	88.0	7.945	* 31.3	2184.6	88.1	11.017	7.927	0.013	38.9	9.2	
615	812	5.77	34.499	2387.	2238.	* 2268	* 728.0	37.1	2131.0	69.1	7.899	* 38.0	2132.9	68.3	13.328	7.875	0.690	17.7	-4.5	
616	723	4.65	34.451	2311.	2238.	* 2263	* 641.3	33.7	2121.6	74.7	7.948	* 33.4	2122.9	73.6	12.041	7.919	0.744	22.1	-0.4	
617	751	4.65	34.445	2312.	2238.	* 2257	* 661.4	35.0	2128.7	72.2	7.935	* 34.7	2130.1	71.2	12.444	7.905	0.719	19.4	-3.2	
618	882	4.37	34.458	2318.	2238.	* 2260	* 687.0	32.5	2128.5	77.1	7.969	* 32.2	2121.9	75.9	11.557	7.937	0.767	23.7	1.8	
619	1054	3.62	34.542	2323.	2232.	* 2258	* 564.3	31.0	2128.3	88.7	7.996	* 38.6	2122.3	79.1	11.188	7.954	0.881	24.8	1.3	
620	1386	3.48	34.689	2333.	2232.	* 2251	* 531.3	29.4	2117.0	84.0	8.028	* 28.9	2120.3	82.0	10.758	7.969	0.842	26.2	2.1	
622	1809	3.27	34.868	2338.	2194.	* 2216	* 488.3	22.2	2064.9	108.9	0.131	* 21.7	2068.7	103.6	8.699	0.081	1.059	42.5	16.9	
624	2314	2.98	34.898	2342.	2193.	* 2211	* 388.0	21.3	2068.7	118.9	0.151	* 20.6	2065.7	106.0	8.692	0.081	1.091	48.5	13.4	
301	2547	2.68	34.869	2348.	2205.	* 2228	* 392.0	22.3	2075.1	107.7	0.139	* 21.5	2088.5	103.0	9.134	0.039	1.053	34.3	6.4	
302	2744	2.58	34.868	2351.	2218.	* 2227	* 396.7	22.6	2080.7	100.7	0.134	* 21.0	2088.6	101.7	9.399	0.027	1.039	38.0	2.3	
303	2938	2.49	34.862	2354.	2287.	* 2228	* 388.9	21.0	2075.1	118.1	0.158	* 20.9	2081.5	104.7	9.215	0.036	1.078	31.6	2.4	
304	3143	2.42	34.861	2356.	2224.	* 2225	* 419.6	24.1	2098.3	101.7	0.113	* 23.0	2104.0	98.1	10.251	7.989	0.982	28.7	-9.2	
305	3342	2.36	34.854	2368.	2217.	* 2235	* 398.3	22.4	2086.6	108.0	0.141	* 21.4	2093.0	101.0	9.763	0.018	1.048	23.9	-6.6	
306	3541	2.28	34.846	2362.	2238.	* 2233	* 419.0	24.2	2104.0	101.0	0.114	* 23.0	2111.4	95.6	10.688	7.974	0.977	15.2	-16.1	
307	3841	1.98	34.919	2371.	2226.	* 2250	* 388.9	22.3	2094.4	109.3	0.151	* 21.1	2102.7	102.2	9.995	0.088	1.043	17.7	-14.7	
308	4040	1.63	34.776	2376.	2250.	* 2263	* 428.9	25.4	2125.0	98.9	0.105	* 24.0	2134.2	91.9	11.368	7.945	0.936	4.8	-20.7	
309	4240	1.21	34.743	2381.	2254.	* 2281	* 421.0	25.3	2129.1	99.6	0.111	* 23.8	2137.9	92.2	11.486	7.943	0.939	1.9	-32.3	
310	4439	1.12	34.739	2382.	2275.	* 2269	* 481.0	29.1	2157.1	88.9	0.058	* 27.4	2168.0	81.7	13.182	7.888	0.832	-11.6	-46.6	
317	4583	1.11	34.734	2385.	2288.	* 2292	* 425.7	25.7	2135.7	98.6	0.187	* 24.1	2145.3	98.6	11.067	7.926	0.923	-4.5	-48.0	

191

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	90T DEPTH
105	1	20 2 73	0452	20 0.3 S	2 3.0 E	5308
105	3	20 2 73	1047	20 0.2 S	1 50.0 E	5473
105	5	20 2 73	1329	20 0.3 S	1 57.4 E	5471

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH, T=INSITU				CALC PARAMETERS P, T=INSITU				DELTA CO3 (CALC)	DELTA CO3 (ARRG)		
				TALK (P/KG)	TIT TC02 (E-6)	GC TC02 (E-6)	PCO2 (ATM)	H2CO3 (P/KG)	HCO3- (P/KG)	CO3= (P/KG)	PH	H2CO3 (P/KG)	HCO3- (P/KG)	CO3= (P/KG)	PH			PH	ICP (E-6)
502	1	24.73	35.920	2373.	2033.	*	356.3	10.1	1790.5	242.3	0.241	10.1	1790.5	242.3	5.735	0.241	2.532	137.2	176.9
301	2	24.62	35.900	2373.	2031.	* 2051	353.0	10.1	1770.7	242.2	0.244	10.1	1770.7	242.2	5.709	0.243	2.549	137.0	176.7
503	11	24.49	35.897	2373.	2033.	* 2050	355.1	10.2	1782.0	240.0	0.242	10.2	1782.0	240.0	5.734	0.242	2.534	135.6	173.3
504	31	23.54	35.799	2360.	2030.	*	342.2	10.8	1780.9	239.1	0.232	10.8	1781.8	239.0	5.612	0.251	2.508	133.6	173.2
505	51	20.09	35.723	2350.	2030.	*	325.0	10.3	1790.9	226.0	0.201	10.3	1799.1	220.7	5.500	0.260	2.374	101.0	160.5
506	77	18.58	35.727	2350.	2053.	*	323.0	10.0	1831.2	213.0	0.259	10.8	1831.4	212.0	5.946	0.256	2.229	166.9	146.3
302	90	16.06	35.560	2344.	2058.	* 2124	372.1	13.1	1893.4	101.4	0.202	13.1	1893.7	101.2	6.336	0.190	1.809	135.0	114.4
507	102	17.37	35.620	2351.	2075.	*	346.2	12.0	1869.4	194.6	0.230	12.0	1869.6	194.4	5.936	0.227	2.030	140.2	127.5
510	127	15.20	35.425	2354.	2100.	*	384.5	14.3	1919.3	166.5	0.184	14.3	1919.6	166.2	6.620	0.179	1.726	119.0	99.0
508	151	14.24	35.304	2320.	2100.	*	390.5	14.9	1932.7	150.3	0.174	14.9	1933.1	150.0	6.774	0.169	1.633	111.4	90.5
509	101	13.35	35.199	2319.	2139.	*	473.9	10.7	1900.2	132.2	0.090	10.6	1900.6	131.0	0.106	0.091	1.360	04.9	64.0
303	197	13.04	35.155	2310.	2135.	* 2157	450.5	10.2	1903.0	133.0	0.109	10.2	1903.4	133.4	7.904	0.102	1.375	06.4	65.4
304	246	11.93	35.051	2315.	2136.	* 2102	445.6	10.4	1906.9	130.0	0.116	10.3	1907.4	130.3	7.013	0.107	1.339	02.9	61.7
305	277	11.03	34.930	2311.	2130.	* 2161	421.5	17.9	1900.6	131.5	0.134	17.0	1901.2	131.0	7.517	0.124	1.341	03.3	62.0
306	316	10.22	34.052	2311.	2151.	* 2169	462.9	20.2	2012.0	110.9	0.090	20.1	2012.6	110.3	0.240	0.084	1.200	30.2	40.9
307	345	9.46	34.770	2307.	2171.	* 2196	522.2	23.4	2042.0	104.0	0.046	23.2	2043.5	104.2	9.270	0.033	1.003	55.9	34.9
308	395	8.42	34.677	2304.	2104.	* 2210	556.1	25.0	2062.6	95.6	0.017	25.6	2063.4	95.0	9.954	0.002	0.905	46.2	24.6
309	492	6.05	34.551	2310.	2229.	* 2241	694.6	34.0	2119.9	75.1	7.924	33.0	2120.0	74.4	12.450	7.905	0.734	24.9	3.0
310	512	6.6	34.521	2304.	2220.	* 2242	669.5	33.1	2110.6	70.4	7.936	32.9	2111.5	75.6	12.119	7.917	0.766	25.9	4.0
311	527	6.36	34.513	2301.	2213.	* 2230	641.0	32.0	2102.9	70.2	7.992	31.0	2103.0	77.4	11.712	7.931	0.783	27.6	5.6
312	592	5.01	34.502	2306.	2226.	* 2251	669.2	34.0	2117.0	74.2	7.934	33.7	2118.9	73.4	12.200	7.911	0.742	23.0	0.0
315	692	5.09	34.471	2306.	2233.	* 2265	606.5	35.0	2126.5	70.7	7.920	33.5	2127.7	69.0	12.790	7.893	0.705	18.5	-3.9
316	741	4.71	34.459	2303.	2230.	* 2257	665.0	35.2	2123.2	71.6	7.931	34.9	2124.5	70.6	12.541	7.902	0.713	10.9	-3.7
317	791	4.49	34.463	2319.	2231.	* 2255	602.2	32.1	2120.7	70.2	7.973	31.0	2122.2	77.0	11.434	7.942	0.770	24.9	2.2
310	891	4.11	34.409	2317.	2230.	* 2253	655.5	34.3	2130.0	73.7	7.949	33.9	2131.6	72.4	12.192	7.914	0.732	19.5	-3.5
319	991	3.03	34.527	2321.	2226.	* 2250	550.2	30.4	2114.0	01.5	0.001	30.1	2115.9	00.1	10.925	7.962	0.010	25.3	3.0
321	1191	3.62	34.644	2327.	2222.	* 2252	510.3	20.5	2106.7	96.0	0.030	20.0	2109.0	04.9	10.390	7.903	0.063	29.5	5.6
102	1611	3.46	34.045	2320.	2192.	* 2225	417.4	23.0	2063.5	103.4	0.114	22.5	2068.9	100.6	0.087	0.051	1.027	41.4	10.4
103	1861	3.25	34.000	2330.	2100.	* 2211	390.9	22.2	2059.0	106.0	0.131	21.6	2063.0	103.4	0.739	0.059	1.050	41.0	10.1
104	2110	3.1	34.002	2335.	2194.	* 2205	400.5	22.4	2065.3	106.3	0.130	21.7	2069.0	102.5	0.964	0.040	1.040	30.4	11.9
105	2337	2.07	34.903	2330.	2190.	* 2232	300.0	21.4	2050.3	110.3	0.150	20.7	2063.4	105.9	0.750	0.050	1.003	39.3	12.0
106	2000	2.70	34.995	2344.	2102.	* 2219	346.3	19.7	2044.0	110.4	0.100	10.9	2049.0	113.3	0.225	0.005	1.159	43.9	15.9
107	2050	2.59	34.895	2346.	2205.	* 2224	395.4	22.5	2076.0	106.4	0.135	21.6	2002.1	101.2	9.407	0.023	1.036	29.1	0.2
100	3100	2.51	34.890	2356.	2204.	* 2237	369.9	21.1	2069.9	113.0	0.162	20.2	2076.7	107.1	9.104	0.041	1.096	32.1	2.4
109	3255	2.47	34.909	2357.	2200.	* 2230	376.5	21.6	2075.2	111.3	0.155	20.6	2082.3	105.2	9.377	0.020	1.076	20.4	-1.9
112	3999	2.41	34.005	2364.	2210.	* 2234	305.1	22.1	2006.1	109.0	0.147	20.9	2094.7	102.4	10.210	7.991	1.047	16.1	-10.0
116	4495	2.42	34.004	2365.	2223.	* 2229	399.0	22.7	2092.9	107.4	0.130	21.3	2102.5	99.2	10.933	7.961	1.015	6.0	-20.0
110	4992	2.47	34.003	2369.	2224.	* 2243	309.7	22.3	2092.4	109.3	0.144	20.0	2103.1	100.1	11.272	7.940	1.024	-0.6	-37.3
119	5243	2.46	34.002	2360.	2224.	* 2237	391.9	22.4	2092.9	100.7	0.142	20.0	2104.1	99.1	11.596	7.936	1.013	-5.6	-43.4
123	5423	2.506	34.002	2360.	2219.	* *	379.9	21.7	2095.7	111.6	0.154	20.1	2097.5	101.4	11.434	7.941	1.037	-6.2	-44.0

I FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 187 3 22 2 73 2245 12 0.6 S 1 55.8 E
 187 5 23 2 73 0608 12 0.0 S 1 58.8 E 5581

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM.T=INSITU*					CALC PARAMETERS P.T=INSITU							
				TALK (EQ/KG) (E-6)	TIT TC02 (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG) (E-6)	DELTA CO3= (M/KG) (E-6)
381	3	25.48	36.739	2423.	2879.	* 2867	* 384.9	18.7	1822.5	245.8	0.228	* 18.7	1822.5	245.8	5.821	0.228	2.647	288.8	188.6
382	12	25.31	36.735	2429.	2869.	* 2861	* 361.8	18.1	1803.8	255.1	0.242	* 18.1	1803.8	255.1	5.738	0.242	2.747	218.1	189.9
383	32	25.06	36.732	2421.	2878.	* 2856	* 369.8	18.4	1818.9	248.7	0.233	* 18.4	1811.8	248.7	5.863	0.232	2.677	283.6	183.3
384	51	21.93	36.542	2489.	2864.	* 1961	* 327.6	18.8	1811.2	242.9	0.266	* 18.8	1811.3	242.7	5.437	0.265	2.688	197.3	176.9
385	82	18.42	36.875	2378.	2113.	*	* 396.8	13.4	1911.8	188.6	0.186	* 13.3	1911.2	188.5	6.559	0.183	1.993	142.6	122.8
386	112	13.72	35.387	2328.	2198.	* 2214	* 667.4	25.9	2068.4	183.7	7.968	* 25.9	2068.6	183.5	18.868	7.964	1.873	97.1	36.3
387	151	12.37	35.287	2317.	2216.	* 2241	* 763.8	31.8	2097.8	97.3	7.988	* 38.9	2098.8	87.1	12.888	7.983	0.998	48.3	19.4
318	281	11.32	35.874	2318.	2235.	* 2325	* 888.3	37.8	2124.2	73.8	7.846	* 36.9	2124.6	73.5	14.518	7.838	0.756	26.4	5.3
388	258	18.63	34.997	2316.	2218.	* 2237	* 722.5	31.1	2181.9	85.8	7.923	* 31.8	2182.4	84.7	12.191	7.914	0.868	37.1	15.9
389	388	18.13	34.935	2318.	2218.	* 2273	* 736.8	32.2	2184.2	81.6	7.913	* 32.1	2184.8	81.2	12.548	7.982	0.832	33.3	12.8
311	338	9.48	34.858	2387.	2244.	* 2261	* 887.8	39.7	2137.8	67.3	7.935	* 39.6	2137.6	66.8	15.852	7.821	0.683	18.5	-2.9
312	481	8.69	34.785	2386.	2254.	* 2277	* 939.9	43.1	2148.6	62.2	7.888	* 43.8	2149.3	61.7	16.128	7.792	0.638	13.8	-8.6
315	588	7.49	34.678	2389.	2274.	* 2382	* 1827.4	49.2	2159.9	54.9	7.767	* 48.9	2178.7	54.3	17.895	7.747	0.552	4.8	-17.1
316	579	6.24	34.571	2383.	2268.	* 2271	* 912.7	45.6	2156.7	57.7	7.889	* 45.4	2157.7	57.8	16.368	7.786	0.577	6.7	-13.4
317	699	5.34	34.513	2381.	2282.	* 2269	* 1878.1	53.3	2178.6	48.1	7.739	* 54.9	2179.7	47.4	19.455	7.711	0.479	-3.9	-26.3
318	759	4.71	34.498	2387.	2254.	* 2321	* 793.9	41.9	2158.4	61.6	7.868	* 41.6	2151.8	68.6	14.857	7.328	0.613	8.5	-14.2
319	897	4.33	34.522	2313.	2247.	* 2258	* 787.3	37.9	2141.7	67.4	7.986	* 37.5	2143.3	66.2	13.475	7.878	0.678	13.3	-9.7
328	1847	4.86	34.682	2318.	2241.	* 2258	* 645.6	34.9	2133.5	72.6	7.942	* 34.5	2133.4	71.2	12.961	7.981	0.722	17.8	-6.4
321	1195	3.92	34.786	2321.	2228.	* 2254	* 571.6	31.8	2116.4	88.6	7.991	* 38.6	2118.6	78.8	11.382	7.944	0.882	23.3	-8.5
322	1392	3.81	34.831	2325.	2218.	* 2263	* 515.7	28.1	2182.2	87.7	8.832	* 27.6	2184.9	85.5	18.543	7.977	0.373	28.3	3.9
323	1589	3.661	34.893	2327.	2197.	* 2285	* 437.9	24.8	2873.8	188.8	8.896	* 23.5	2876.3	97.3	9.252	8.834	0.995	38.3	13.4
324	1887	3.391	34.928	2331.	2193.	* 2221	* 412.4	22.8	2865.6	184.5	8.119	* 22.2	2869.6	181.2	9.811	8.845	1.836	39.4	13.6
582	2181	3.14	34.921	2336.	2198.	* 2289	* 489.6	22.9	2878.5	184.6	8.121	* 22.2	2875.1	188.7	9.282	8.836	1.831	36.8	9.3
584	2778	2.73	34.985	2346.	2289.	* 2238	* 488.8	23.2	2881.5	184.3	8.122	* 22.3	2887.4	99.3	9.695	8.813	1.816	28.1	-8.5
585	3175	2.51	34.893	2352.	2214.	* 2238	* 484.8	23.1	2886.8	184.9	8.127	* 22.1	2892.7	99.2	9.941	8.883	1.815	23.4	-6.5
586	3474	2.43	34.898	2363.	2224.	* 2229	* 483.3	23.1	2895.1	185.8	8.129	* 22.8	2182.4	99.5	18.162	7.993	1.818	28.1	-18.9
587	3772	2.37	34.886	2364.	2217.	* 2248	* 382.8	22.8	2884.7	118.4	8.158	* 28.8	2892.9	183.3	9.948	8.883	1.857	28.8	-12.1
588	4871	2.38	34.885	2365.	2222.	* 2238	* 392.3	22.5	2891.4	188.1	9.148	* 21.3	2188.1	188.6	18.459	7.981	1.829	13.3	-19.8
589	4371	2.38	34.881	2361.	2214.	* 2221	* 381.2	21.9	2881.9	118.2	8.151	* 28.6	2891.3	182.1	18.486	7.979	1.844	18.7	-23.7
512	5264	2.48	34.875	2361.	2228.	* 2229	* 419.5	24.8	2181.5	182.5	8.114	* 22.4	2112.5	93.1	12.418	7.986	0.952	-11.9	-49.8
518	5464	2.473	34.875	2358.	2214.	* 2232	* 389.2	22.3	2893.2	188.5	8.142	* 28.6	2894.9	98.4	11.889	7.928	1.886	-9.9	-48.7
523	5537	2.476	34.876	2359.	2216.	* 2241	* 392.8	22.4	2885.6	187.9	8.148	* 28.8	2897.5	97.7	11.981	7.922	0.999	-12.2	-51.4

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSCOSS STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
189	3	26	2 73	1830	1 59.9 S	4 32.0 W
189	4	25	2 73	1325	1 59.8 S	4 33.0 W
189	5	26	2 73	2106	2 8.8 S	4 33.0 W

GC T002 VALUES ARE NOT USED FOR COMPUTATION

SAMP	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATH,T=INSITU*								DELTA					
			SAL. (8/100)	TALK (EQ/KG)	TIT (M/KG)	T002 (M/KG)	T003 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	ICP	CO3= (CALC)	CO3= (ARRG)
483	2	28.94	35.845	2384.	1937.	* 1949	* 343.4	9.9	1669.1	239.1	8.259	* 5.9	1669.1	239.1	5.513	8.259	2.661	214.0	193.7
484	12	28.84	35.841	2388.	1924.	* 1943	* 327.4	8.5	1658.6	264.9	9.274	* 8.5	1658.6	264.9	5.327	8.274	2.721	219.8	199.5
485	22	28.77	35.872	2384.	1933.	* 1961	* 335.6	8.7	1662.6	261.7	8.266	* 8.7	1662.7	261.6	5.438	8.263	2.698	216.5	196.1
486	32	28.2	35.296	2321.	1952.	* 1989	* 339.8	8.9	1682.6	268.5	8.262	* 8.9	1682.7	258.5	5.477	8.261	2.695	215.2	194.9
487	42	27.78	35.531	2348.	1982.	* 2018	* 358.8	9.5	1719.3	233.2	8.243	* 9.5	1719.4	253.1	5.732	8.242	2.643	287.8	187.5
488	77	15.81	35.532	2345.	2142.	* 2183	* 474.6	17.3	1976.9	147.8	8.188	* 17.3	1977.1	147.6	7.843	8.185	1.542	181.6	98.9
489	102	15.28	35.589	2342.	2147.	* 2187	* 484.4	17.9	1985.4	142.6	8.898	* 17.9	1986.7	142.4	8.848	8.895	1.486	96.2	75.5
410	142	14.48	35.462	2336.	2159.	* 2189	* 514.7	19.6	2088.1	131.3	8.872	* 19.5	2088.4	131.8	8.576	8.867	1.362	84.5	63.6
411	172	14.21	35.296	2321.	2169.	* 2234	* 544.6	20.8	2023.5	124.6	8.849	* 20.8	2023.9	124.3	9.858	8.843	1.291	77.5	56.6
412	242	13.32	35.321	2329.	2176.	* 2284	* 564.3	22.2	2037.3	116.5	8.832	* 22.1	2037.8	116.8	9.478	8.823	1.281	68.7	47.7
415	282	12.43	35.286	2328.	2283.	* 2229	* 685.8	27.8	2079.4	95.9	7.952	* 27.7	2079.9	95.4	11.445	7.941	8.985	47.9	26.6
416	352	18.38	34.974	2311.	2215.	* 2248	* 722.7	31.3	2099.9	83.7	7.921	* 31.2	2108.6	83.2	12.354	7.988	8.853	35.8	13.5
417	421	8.32	34.741	2381.	2223.	* 2251	* 753.5	35.8	2114.1	73.9	7.895	* 34.9	2114.8	73.3	13.219	7.879	8.747	24.4	2.8
681	484	7.89	34.621	2299.	2216.	* 2248	* 687.5	33.4	2106.8	75.9	7.927	* 33.2	2187.6	75.2	12.363	7.988	8.763	25.7	3.9
682	554	6.38	34.567	2299.	2213.	* 2224	* 652.5	32.5	2183.4	77.2	7.945	* 32.3	2184.4	76.4	11.933	7.923	8.774	26.3	4.3
418	718	5.16	34.482	2381.	2225.	* 2235	* 678.7	34.9	2118.1	72.8	7.929	* 34.6	2119.4	71.8	12.552	7.981	8.718	19.7	-2.8
419	868	4.41	34.516	2318.	2233.	* 2251	* 658.5	34.7	2125.7	72.6	7.948	* 34.4	2127.2	71.4	12.424	7.986	8.722	18.7	-4.2
420	1083	4.34	34.656	2316.	2228.	* 2252	* 563.6	38.3	2187.7	82.8	7.996	* 29.9	2189.6	88.5	11.847	7.957	8.818	26.7	3.4
421	1384	4.29	34.873	2328.	2197.	* 2263	* 468.9	25.1	2073.7	96.2	8.878	* 24.7	2078.3	94.1	9.564	8.819	8.962	37.7	13.6
683	1583	3.98	34.961	2328.	2175.	* 2198	* 488.8	21.6	2043.1	188.2	8.131	* 21.2	2048.5	185.4	8.522	8.869	1.888	46.5	21.7
422	1685	3.95	34.959	2322.	2176.	* 2196	* 397.4	21.5	2045.6	188.9	8.133	* 21.8	2049.8	185.9	8.485	8.871	1.886	46.9	21.9
423	1885	3.64	34.961	2328.	2172.	* 2198	* 386.8	21.2	2041.8	189.8	8.142	* 20.6	2044.9	186.5	8.461	8.873	1.891	45.5	28.8
684	1967	3.48	34.959	2327.	2161.	* 2195	* 344.4	19.8	2021.7	128.3	8.188	* 18.4	2026.1	116.5	7.727	8.112	1.194	53.9	27.9
424	2885	3.48	34.952	2326.	2178.	* 2189	* 384.7	21.3	2046.8	189.9	8.145	* 20.7	2051.1	186.2	8.571	8.867	1.888	43.3	17.1
685	2219	3.24	34.944	2329.	2175.	* 2159	* 368.7	20.5	2041.1	113.4	8.161	* 19.9	2043.9	109.3	8.412	8.875	1.119	44.1	17.3
687	2728	3.75	34.913	2338.	2187.	* 2198	* 371.1	21.8	2054.1	111.9	8.158	* 20.2	2068.8	106.8	8.861	8.853	1.893	36.3	7.9
688	2972	2.65	34.986	2338.	2194.	* 2175	* 386.9	22.9	2054.8	108.8	8.142	* 21.1	2078.4	102.5	9.424	8.826	1.849	29.1	-8.1
689	3224	2.58	34.988	2348.	2282.	* 2198	* 482.8	22.9	2074.4	184.7	8.127	* 21.9	2081.2	98.9	9.984	8.881	1.812	22.5	-7.6
618	3476	2.49	34.994	2346.	2198.	* 2194	* 376.6	21.5	2066.8	118.4	9.153	* 20.5	2073.5	104.8	9.611	8.817	1.864	24.5	-6.5
611	3725	2.42	34.889	2346.	2285.	* 2193	* 392.8	22.5	2076.1	106.4	9.137	* 21.4	2084.8	99.6	10.228	7.991	1.819	17.8	-14.9
612	3976	2.38	34.884	2349.	2194.	* 2217	* 358.8	28.6	2059.8	114.4	8.172	* 19.5	2067.7	106.9	9.621	8.817	1.892	28.9	-12.8
618	4979	2.28	34.868	2358.	2214.	* 2215	* 483.6	23.3	2086.9	183.7	8.126	* 21.8	2097.4	94.8	11.757	7.938	8.959	-5.9	-42.7
625	5123	2.218	34.868	2354.	2217.	* 2218	* 482.4	23.3	2089.3	184.4	8.128	* 21.7	2108.1	95.2	11.859	7.926	8.973	-7.8	-45.1

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSECS ATLANTIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
111	2	1 3 73	1206	2 0.0 N	14 1.3 W	5169
111	4	1 3 73	1730	2 0.0 N	14 0.6 W	
111	5	1 3 73	2815	2 0.5 N	13 59.8 W	

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS				CALC PARAMETERS P-IATH.T=INSITU				CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)			
			SAL. (P/1000)	TALK (EQ/KG)	TIT (E-6)	GC TC02 (M/KG)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)			PH	PH	ICP (E-6)
501	2	29.12	35.456	2330.	1955.	* 1973	* 346.9	8.9	1601.2	264.9	8.250	* 9.9	1681.3	264.9	5.326	8.250	2.753	219.8	199.6
502	12	29.89	35.452	2320.	1951.	* 1956	* 342.2	8.8	1676.3	266.8	8.262	* 8.8	1676.3	263.9	5.474	8.262	2.764	220.8	200.6
504	42	28.75	35.480	2330.	1957.	* 1989	* 345.1	8.9	1584.7	263.4	8.250	* 8.9	1684.8	263.3	5.534	8.257	2.738	218.0	197.7
505	52	24.90	36.874	2374.	2056.	* 2071	* 403.2	11.4	1818.2	226.4	8.190	* 11.4	1818.4	226.2	5.361	8.196	2.392	180.9	168.5
506	76	17.29	35.735	2353.	2121.	* 2195	* 434.9	15.2	1939.2	166.7	9.146	* 15.1	1939.3	166.5	7.182	8.144	1.744	120.6	39.9
507	103	14.95	35.536	2330.	2174.	* 2200	* 571.3	21.4	2029.9	123.8	8.834	* 21.3	2029.8	123.7	9.325	8.830	1.288	77.4	56.7
508	163	13.54	35.356	2331.	2177.	* 2205	* 567.4	22.2	2037.6	117.2	9.831	* 22.1	2037.9	116.9	9.440	8.825	1.212	70.2	49.3
509	213	12.87	35.243	2325.	2104.	* 2229	* 591.2	23.8	2050.9	109.3	8.811	* 23.7	2051.3	109.8	9.923	8.803	1.126	61.8	30.8
510	274	11.73	35.130	2319.	2197.	* 2217	* 641.3	26.6	2072.2	98.2	7.975	* 26.5	2072.7	97.8	10.842	7.965	1.007	58.2	29.8
511	313	10.73	35.011	2315.	2202.	* 2228	* 651.6	27.9	2091.2	92.9	7.964	* 27.8	2091.8	92.4	11.158	7.953	0.948	44.4	23.1
515	416	8.35	34.756	2307.	2201.	* 2229	* 614.4	28.5	2084.4	80.1	7.978	* 28.4	2085.2	87.5	10.919	7.962	0.891	38.6	16.9
516	504	6.56	34.593	2309.	2191.	* 2234	* 523.5	25.9	2071.1	94.0	8.835	* 25.7	2072.1	93.2	9.652	8.815	0.945	43.5	21.6
517	626	5.52	34.527	2305.	2217.	* 2231	* 622.9	32.8	2107.8	78.1	7.961	* 31.7	2108.1	77.2	11.573	7.936	0.781	26.5	4.2
518	706	5.04	34.517	2312.	2203.	* 2240	* 525.8	27.4	2086.6	89.9	8.828	* 27.2	2089.0	87.8	9.994	8.800	0.889	36.4	14.8
519	807	4.74	34.540	2310.	2226.	* 2235	* 624.5	32.9	2117.1	76.0	7.957	* 32.6	2110.5	74.8	11.863	7.926	0.750	22.7	-8.1
520	1006	4.46	34.615	2317.	2197.	* 2275	* 477.7	25.5	2076.9	94.7	8.864	* 25.1	2070.9	93.8	9.447	8.825	0.944	39.2	15.9
521	1200	4.43	34.821	2317.	2200.	* 2217	* 518.7	27.6	2091.6	80.7	8.839	* 27.2	2094.8	86.8	10.393	7.983	0.886	31.3	7.5
522	1409	4.2	34.951	2323.	2160.	* 2211	* 399.8	19.3	2022.1	118.6	8.173	* 18.9	2023.2	115.9	7.605	8.119	1.189	58.6	34.3
523	1609	3.95	34.961	2323.	2176.	* 2207	* 395.1	21.4	2045.2	109.4	8.136	* 20.9	2048.6	106.5	8.440	8.874	1.091	47.4	22.5
501	1833	3.60	34.963	2325.	2176.	* 2214	* 386.5	21.1	2044.3	118.6	8.144	* 20.6	2048.2	107.2	8.457	8.873	1.099	46.8	20.3
202	2032	3.40	34.954	2325.	2177.	* 2200	* 384.6	21.3	2045.8	109.9	8.145	* 20.6	2050.2	106.2	8.595	8.866	1.088	43.8	16.8
203	2294	3.09	34.930	2332.	2103.	* 2219	* 379.1	21.2	2051.2	110.6	8.150	* 20.5	2056.1	106.4	8.670	8.862	1.009	40.6	13.5
204	2534	2.92	34.930	2334.	2106.	* 2206	* 379.0	21.4	2054.5	110.1	8.149	* 20.6	2060.0	105.4	8.890	8.851	1.079	37.0	9.1
205	2784	2.90	34.920	2339.	2191.	* 2209	* 379.6	21.5	2059.9	118.3	8.150	* 20.6	2063.3	105.1	9.889	8.841	1.076	33.9	5.3
206	3035	2.66	34.910	2341.	2197.	* 2221	* 507.8	22.8	2066.9	100.0	8.142	* 21.1	2073.4	102.5	9.486	8.823	1.049	28.4	-1.1
209	3535	2.46	34.896	2340.	2200.	* 2219	* 376.7	21.6	2067.9	110.5	8.153	* 20.5	2075.6	103.9	9.660	8.815	1.063	23.7	-7.5
210	4138	2.36	34.884	2340.	2200.	* 2217	* 374.8	21.5	2068.0	110.4	8.155	* 20.3	2077.8	102.7	10.166	7.993	1.050	14.5	-10.9
211	4439	2.27	34.873	2351.	2207.	* 2213	* 384.5	22.2	2076.5	100.3	8.145	* 20.8	2088.1	100.1	10.692	7.971	1.024	7.6	-27.8
212	4690	2.25	34.965	2354.	2205.	* 2216	* 372.2	21.5	2072.4	111.1	8.150	* 20.1	2082.6	102.3	10.607	7.974	1.046	6.1	-29.5
213	4942	2.21	34.862	2350.	2209.	* 2220	* 390.7	22.6	2079.8	106.6	8.139	* 21.1	2090.4	97.6	11.374	7.944	0.997	-2.6	-39.2
223	5130	2.200	34.858	2354.	2207.	* 2237	* 376.3	21.9	2075.2	110.8	8.154	* 20.2	2086.3	100.4	11.169	7.952	1.026	-2.9	-40.3

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 113 3 5 3 73 0740 10 59.4 N 20 32.4 W 4998
 113 5 5 3 73 1650 11 8.9 N 20 35.5 W
 113 3 5 3 73 2102 11 1.8 N 20 36.0 W

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

MEASURED PARAMETERS						CALC PARAMETERS P=(ATH,T=INSITU)						CALC PARAMETERS P.T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (ED/KG)	TIT (M/KG)	GC TCO2 (M/KG)	PCO2 (ATM)	HCO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	AM (E-9)	PH	ICP (E-6)	DELTA CO3* (M/KG)	DELTA CO3* (ARRG) (M/KG)
602	13	24.18	35.777	2361.	2193.	* 2026	* 273.0	7.9	1686.3	274.0	8.330	* 7.9	1686.3	274.0	4.683	8.329	2.982	229.5	209.2
603	23	24.83	35.792	2354.	2084.	* 2086	* 326.3	9.5	1747.8	246.7	8.268	* 9.5	1747.9	246.7	5.489	8.267	2.587	281.3	181.0
604	32	23.99	35.795	2356.	2085.	* 2089	* 325.8	9.4	1748.1	247.5	8.263	* 9.4	1748.2	247.4	5.394	8.268	2.595	282.8	181.6
605	47	20.08	35.626	2346.	2086.	* 2116	* 418.5	13.5	1806.6	185.9	8.168	* 13.5	1886.7	185.0	6.818	8.166	1.941	148.1	119.6
606	62	16.24	35.583	2345.	2119.	* 2211	* 424.8	15.3	1941.5	162.2	9.151	* 15.3	1941.7	162.1	7.896	8.149	1.638	116.1	95.5
607	93	14.28	35.432	2331.	2191.	* 2244	* 642.0	24.5	2856.0	109.6	7.985	* 24.5	2857.0	109.5	18.419	7.982	1.137	63.2	42.5
608	122	13.37	35.348	2335.	2135.	* 2236	* 428.2	16.0	1973.7	144.5	8.138	* 16.0	1974.8	144.2	7.345	8.134	1.494	97.7	76.9
609	161	12.47	35.249	2322.	2201.	* 2321	* 668.9	27.1	2875.9	98.1	7.961	* 27.0	2875.2	97.8	11.877	7.956	1.811	51.8	38.1
610	223	11.64	35.183	2338.	2168.	* 2271	* 495.7	28.6	2826.5	128.9	8.876	* 28.5	2826.9	128.5	8.544	8.868	1.243	73.3	52.2
611	271	11.86	35.148	2315.	2227.	* 2254	* 753.3	33.6	2113.3	98.1	7.887	* 33.5	2113.8	79.7	13.272	7.877	0.821	32.0	18.8
612	327	10.55	35.124	2326.	2184.	* 2283	* 537.2	23.1	2851.9	188.9	8.041	* 23.8	2852.6	188.4	9.355	8.029	1.116	68.3	39.0
615	377	10.18	35.105	2314.	2243.	* 2277	* 865.7	37.8	2133.8	71.4	7.848	* 37.7	2134.4	70.9	14.669	7.834	0.778	22.5	1.0
616	425	9.46	35.848	2317.	2282.	* 2272	* 611.3	27.3	2881.2	93.5	7.985	* 27.1	2882.1	92.8	18.745	7.969	0.953	43.9	22.3
905	495	9.07	35.855	2317.	2246.	* 2301	* 831.5	37.6	2137.3	71.1	7.868	* 37.4	2138.1	70.5	14.487	7.841	0.724	21.1	-0.7
908	594	7.58	34.847	2311.	2249.	* 2296	* 834.6	39.3	2142.0	66.4	7.852	* 39.5	2143.8	65.6	14.833	7.829	0.671	15.4	-6.7
909	595	6.77	34.757	2311.	2246.	* 2298	* 788.8	38.6	2139.9	67.5	7.872	* 38.3	2141.1	66.6	14.381	7.845	0.679	15.5	-6.9
910	794	6.13	34.766	2314.	2248.	* 2278	* 775.8	38.9	2142.2	66.9	7.876	* 38.5	2143.6	65.5	14.296	7.845	0.671	13.9	-9.7
911	895	5.63	34.756	2312.	2237.	* 2294	* 697.4	35.6	2129.5	71.9	7.916	* 35.2	2131.1	70.7	13.142	7.881	0.720	17.9	-5.0
912	995	5.35	34.981	2317.	2227.	* 2235	* 617.0	31.9	2116.0	79.2	7.965	* 31.4	2117.8	77.7	11.858	7.926	0.793	24.1	0.9
901	1078	5.35	34.859	2322.	2226.	* 2281	* 553.3	38.6	2113.1	82.3	7.981	* 38.2	2115.1	80.7	11.495	7.940	0.825	26.4	3.8
915	1097	5.23	34.888	2320.	2224.	* 2269	* 598.5	38.6	2111.2	82.3	7.982	* 38.1	2113.2	80.7	11.498	7.940	0.825	26.2	2.7
916	1196	4.87	34.912	2324.	2287.	* 2232	* 581.7	36.3	2087.5	93.2	8.846	* 25.9	2089.9	91.2	18.882	8.888	0.934	35.9	12.2
902	1327	4.62	34.962	2324.	2283.	* 2285	* 483.9	25.6	2082.1	95.3	8.859	* 25.1	2084.8	93.1	9.821	8.889	0.954	36.6	12.5
903	1576	3.95	34.955	2325.	2185.	* 2211	* 425.6	23.1	2062.6	183.4	8.187	* 22.6	2065.9	188.6	8.993	8.846	1.831	41.8	16.9
904	1824	3.63	34.955	2324.	2177.	* 2212	* 398.8	21.4	2046.3	189.3	8.148	* 28.8	2059.2	186.8	8.926	8.869	1.886	44.8	19.2
905	2070	3.35	34.953	2338.	2183.	* 2287	* 387.7	21.5	2052.0	189.5	8.142	* 28.8	2056.5	185.7	8.673	8.862	1.883	42.1	15.8
906	2318	3.12	34.947	2335.	2197.	* 2248	* 489.7	22.9	2069.5	184.6	8.121	* 22.1	2074.4	188.5	9.325	8.838	1.829	34.3	7.2
907	2567	2.92	34.934	2338.	2191.	* 2213	* 383.3	21.6	2059.8	189.6	8.146	* 28.0	2065.3	184.9	8.985	8.846	1.874	36.1	8.2
908	2818	2.76	34.926	2340.	2189.	* 2287	* 371.9	21.1	2056.0	112.8	8.158	* 28.2	2062.1	186.7	8.951	8.848	1.892	35.1	5.3
909	3868	2.65	34.918	2343.	2156.	* 2215	* 388.8	21.7	2064.5	189.8	8.149	* 28.7	2071.2	184.1	9.353	8.829	1.866	29.6	8.8
310	3315	2.56	34.989	2343.	2199.	* 2272	* 386.8	22.1	2068.9	188.1	8.143	* 21.8	2076.8	182.8	9.713	8.813	1.844	24.5	-6.8
311	3571	2.471	34.982	2345.	2206.	* 2233	* 389.6	22.3	2076.8	187.7	8.143	* 21.2	2083.7	181.1	9.987	8.801	1.835	28.5	-18.3
312	3824	2.42	34.895	2345.	2218.	* 2255	* 398.0	22.9	2081.0	185.4	8.131	* 21.7	2089.9	98.4	18.445	7.981	1.887	14.5	-17.8
315	4081	2.367	34.991	2353.	2289.	* 2126	* 386.5	22.2	2079.5	188.3	8.144	* 21.8	2087.2	188.8	18.388	7.984	1.831	13.4	-19.8
316	4337	2.33	34.883	2355.	2286.	* 2244	* 374.8	21.5	2073.3	111.2	9.157	* 28.2	2082.7	183.1	18.385	7.987	1.854	12.1	-22.1
317	4543	2.38	34.979	2359.	2215.	* 2243	* 387.2	22.3	2084.2	188.5	8.144	* 28.9	2093.9	188.2	18.825	7.966	1.824	6.2	-28.8
329	4738	2.31	34.879	2367.	2226.	* 2267	* 397.1	22.9	2096.1	187.1	8.135	* 21.4	2106.2	98.4	11.231	7.958	1.886	1.7	-34.1
328	4818	2.33	34.877	2366.	2221.	* 2261	* 386.8	22.3	2089.5	189.2	8.146	* 29.8	2099.9	188.3	11.851	7.957	1.826	2.2	-33.9
323	4982	2.34	34.879	2371.	2227.	* 2268	* 388.5	22.5	2095.0	188.0	8.143	* 21.8	2106.3	99.7	11.128	7.958	1.828	8.3	-36.1

! FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSECS	ATLANTIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
	114	1	12 3 73	2022	21 19.5 N	21 46.5 W	4343
	114	5	13 3 73	0229	21 18.8 N	21 46.8 W	4359
	114	7	13 3 73	0509	21 18.8 N	21 46.8 W	4368

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS				CALC PARAMETERS P=(ATH,T=INSITU)										DELTA		
			SAL. (0/00)	TALK (M/KG)	TIT (E-6)	GC TC02 (M/KG)	PC02 (ATH) (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
181	16	19.97	36.798	2409.	2086.	* 2113	* 335.6	10.8	1848.4	228.8	9.252	* 18.8	1848.4	228.8	5.686	8.251	2.446	181.6	161.2
182	185	19.81	36.843	2483.	2111.	* 2111	* 383.7	12.4	1892.3	286.4	8.283	* 12.4	1892.3	286.4	6.328	8.199	2.226	168.4	139.9
183	135	18.15	36.645	2392.	2139.	* 2159	* 427.2	14.5	1944.1	180.4	8.150	* 14.4	1944.4	188.1	7.828	8.154	1.935	134.1	113.5
184	165	17.49	36.517	2385.	2116.	* 2154	* 388.8	13.1	1912.7	198.1	8.198	* 13.1	1913.1	189.8	6.417	9.193	2.031	143.4	122.7
185	224	16.15	36.219	2368.	2132.	* 2169	* 415.8	14.9	1948.7	168.4	8.168	* 14.9	1949.2	167.9	7.844	8.152	1.793	121.1	108.2
186	264	15.88	36.844	2355.	2143.	* 2177	* 445.5	16.6	1973.8	152.7	8.138	* 16.5	1974.4	152.2	7.581	8.128	1.628	184.9	83.9
187	308	14.38	35.953	2357.	2147.	* 2182	* 435.7	16.6	1979.2	151.2	8.136	* 16.5	1979.9	150.6	7.496	8.125	1.587	183.8	91.9
188	363	12.68	35.757	2343.	2156.	* 2178	* 456.4	18.3	2001.5	136.2	8.112	* 18.2	2002.3	135.5	7.978	8.859	1.428	87.4	66.1
189	428	12.12	35.632	2336.	2169.	* 2285	* 499.6	20.4	2024.7	124.8	8.075	* 20.2	2025.6	123.2	8.718	8.858	1.297	74.7	53.2
189	481	11.28	35.478	2329.	2191.	* 2218	* 571.9	24.1	2068.1	106.9	8.018	* 23.9	2061.8	106.8	9.988	8.881	1.183	57.8	35.3
111	534	10.51	35.336	2322.	2223.	* 2252	* 722.2	31.1	2186.4	85.5	7.923	* 38.9	2187.4	84.7	12.587	7.983	8.878	35.2	13.4
112	556	10.12	35.298	2323.	2219.	* 2256	* 684.8	29.9	2181.2	87.9	7.943	* 29.7	2182.2	87.1	11.978	7.922	8.981	37.4	15.5
115	591	10.009	35.389	2319.	2212.	* 2251	* 665.9	29.2	2093.5	89.3	7.953	* 28.9	2094.6	90.4	11.736	7.938	8.915	38.4	16.5
116	639	9.383	35.258	2321.	2214.	* 2233	* 649.3	29.8	2095.8	99.2	7.361	* 28.8	2097.8	88.2	11.573	7.937	8.911	37.9	15.7
117	688	8.612	35.164	2384.	2223.	* 2254	* 753.1	34.6	2113.8	75.4	7.896	* 34.3	2114.3	74.4	13.514	7.869	8.767	23.6	1.4
118	734	8.885	35.185	2319.	2228.	* 2263	* 649.7	38.4	2185.1	84.5	7.955	* 38.1	2186.5	83.4	11.824	7.927	8.859	32.2	9.8
119	785	7.525	35.844	2299.	2225.	* 2254	* 756.5	36.1	2117.4	71.6	7.889	* 35.7	2118.7	70.5	13.862	7.858	8.724	18.8	-3.7
121	898	6.784	34.968	2318.	2234.	* 2267	* 724.4	35.6	2125.9	72.5	7.985	* 35.2	2127.5	71.3	13.488	7.878	8.731	18.7	-4.1
123	1098	6.886	35.829	2325.	2225.	* 2248	* 592.9	29.7	2118.1	85.1	7.985	* 29.3	2112.2	83.5	11.489	7.943	8.857	29.2	5.8
918	1156	6.829	35.869	2326.	2283.	* 2241	* 586.4	25.4	2088.8	96.7	8.847	* 25.8	2083.1	94.8	9.943	8.883	8.975	48.8	16.4
124	1198	5.943	35.894	2327.	2281.	* 2248	* 494.8	24.9	2077.8	98.3	8.856	* 24.5	2088.2	96.3	9.769	8.818	8.991	41.2	17.5
781	1293	5.66	35.117	2324.	2286.	* 2231	* 516.6	24.3	2085.9	93.8	8.837	* 25.8	2088.4	91.7	10.299	7.987	8.944	35.7	11.8
782	1442	5.18	35.188	2338.	2288.	* 2226	* 467.3	24.3	2075.3	108.4	8.875	* 23.8	2078.3	98.8	9.554	8.828	1.888	48.6	16.2
783	1592	4.59	35.869	2325.	2189.	* 2218	* 437.7	23.1	2062.4	183.4	8.898	* 22.6	2065.7	188.7	9.187	8.837	1.835	41.8	17.8
784	1742	4.13	35.837	2325.	2185.	* 2219	* 418.1	22.5	2057.8	185.5	8.115	* 21.9	2068.6	182.4	8.978	8.847	1.852	42.2	16.9
512	1756	4.161	35.836	2328.	2185.	* 2212	* 411.2	22.1	2055.6	187.3	8.122	* 21.5	2059.3	184.1	8.833	8.854	1.878	43.7	18.4
785	1891	3.86	35.812	2322.	2174.	* 2228	* 391.3	21.3	2042.8	189.9	8.139	* 20.7	2046.9	186.4	8.594	8.866	1.852	44.7	18.9
719	2041	3.61	34.994	2338.	2184.	* 2213	* 394.7	21.6	2053.4	169.8	8.136	* 21.8	2057.7	185.2	8.771	8.857	1.879	42.8	15.8
515	2285	3.489	34.984	2333.	2185.	* 2228	* 386.8	21.4	2053.6	118.8	8.144	* 20.8	2058.3	186.8	8.746	8.859	1.887	41.1	14.3
716	2348	3.28	34.973	2338.	2177.	* 2219	* 372.5	20.7	2043.4	112.9	8.157	* 20.8	2048.5	188.5	8.578	8.867	1.113	42.2	15.1
717	2498	3.12	34.962	2333.	2177.	* 2214	* 363.5	20.3	2042.8	114.7	8.166	* 19.6	2047.4	118.8	8.516	8.878	1.127	42.1	14.4
718	2648	3.83	34.951	2334.	2187.	* 2223	* 384.1	21.5	2055.9	109.5	8.145	* 20.7	2061.6	184.7	9.867	8.843	1.873	33.1	7.8
719	2798	2.91	34.958	2342.	2192.	* 2198	* 377.8	21.2	2039.4	111.4	8.154	* 20.4	2063.4	186.2	9.817	8.845	1.888	33.8	6.3
720	2941	2.91	34.948	2343.	2189.	* 2311	* 366.2	20.7	2054.6	113.7	8.163	* 19.8	2061.8	188.2	8.918	8.858	1.188	35.2	6.1
516	3185	2.782	34.931	2348.	2198.	* 2227	* 356.4	20.2	2053.7	116.1	8.176	* 19.3	2068.5	118.1	8.815	8.855	1.128	33.2	5.5
517	3254	2.618	34.919	2348.	2199.	* 2221	* 376.4	21.4	2066.6	111.8	8.154	* 20.5	2073.6	134.9	9.395	8.827	1.874	28.2	-2.8
518	3485	2.545	34.915	2354.	2284.	* 2232	* 374.8	21.4	2078.8	111.8	8.157	* 20.4	2078.2	185.4	9.478	8.824	1.879	26.9	-3.9
519	3551	2.477	34.988	2353.	2284.	* 2237	* 375.7	21.5	2071.4	111.1	8.155	* 20.4	2079.1	184.9	9.628	8.816	1.869	24.1	-7.2
520	3781	2.432	34.981	2357.	2197.	* 2238	* 358.3	20.1	2059.4	117.5	8.183	* 19.8	2067.7	118.3	9.149	8.839	1.128	28.8	-3.9
521	3858	2.486	34.898	2358.	2281.	* 2233	* 374.2	21.5	2068.4	111.1	9.156	* 20.3	2076.8	183.9	9.877	8.885	1.863	19.6	-12.7
522	3997	2.386	34.895	2354.	2281.	* 2231	* 364.9	21.8	2066.6	113.4	8.166	* 19.8	2073.4	185.8	9.769	8.818	1.883	19.6	-13.3
523	4197	2.39	34.892	2388.	2281.	* 2216	* 353.8	20.3	2063.7	117.1	8.188	* 19.1	2072.9	189.8	9.595	8.819	1.115	28.6	-12.9
524	4336	2.483	34.892	2355.	2292.	* 2216	* 365.8	21.8	2067.5	113.5	8.166	* 19.7	2077.8	185.3	10.091	7.996	1.877	14.4	-19.8

CARBONATE REPORT

20505CS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 115 3 15 3 73 1487 28 2.8 N 26 1.8 W 5266
 115 9 16 3 73 0967 28 6.8 N 25 46.8 W 5313

GC CO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	MEASURED PARAMETERS			CALC PARAMETERS P=LATH.T=INSITU					CALC PARAMETERS P.T=INSITU					DELTA CO3= (CALC)	DELTA CO3= (ARAG)	
				TALK (E-6)	TIT (E-6)	GC CO2 (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	AM	PH			ICP (E-6)
381	18	19.188	36.974	2432.	2898.	* 2117	* 315.2	18.4	1853.7	234.8	8.275	* 18.4	1853.7	233.9	5.328	8.274	2.535	188.7	168.4
382	47	19.824	36.968	2438.	2891.	* 2119	* 306.8	18.1	1843.7	237.2	8.284	* 18.1	1843.8	237.1	5.224	8.282	2.569	191.7	171.3
383	97	18.938	36.968	2438.	2898.	* 2112	* 384.8	18.8	1842.2	237.7	8.287	* 18.8	1842.5	237.5	5.282	8.284	2.573	191.9	171.4
982	161	18.61	36.895	2434.	2183.	* 2112	* 312.5	18.4	1868.8	231.8	8.277	* 18.4	1861.2	231.4	5.347	8.272	2.583	185.3	164.7
983	212	17.18	38.552	2484.	2113.	* 2128	* 342.4	11.9	1896.5	284.5	8.238	* 11.9	1897.8	284.1	5.879	8.231	2.187	157.4	136.6
384	237	16.451	36.359	2398.	2181.	* 2137	* 329.4	11.7	1886.8	282.5	8.248	* 11.7	1887.4	281.9	5.758	8.248	2.154	155.8	134.2
385	287	16.136	36.359	2398.	2113.	* 2137	* 344.1	12.4	1986.8	194.6	8.232	* 12.3	1986.7	194.8	5.995	8.222	2.867	146.7	125.7
386	387	14.147	35.968	2368.	2119.	* 2138	* 354.2	13.5	1929.8	175.6	8.214	* 13.5	1938.8	174.7	6.384	8.288	1.842	126.6	185.3
387	489	12.886	35.755	2356.	2147.	* 2172	* 488.7	16.3	1988.8	149.9	8.156	* 16.2	1981.9	148.9	7.272	8.138	1.561	188.8	78.4
388	587	11.685	35.688	2348.	2141.	* 2175	* 398.8	16.1	1976.9	148.8	8.169	* 16.8	1978.2	146.8	7.113	8.148	1.532	97.8	75.1
389	735	18.855	35.448	2346.	2198.	* 2194	* 498.6	21.4	2851.6	117.8	8.876	* 21.2	2853.1	115.6	8.926	8.849	1.281	64.6	42.4
311	868	8.727	35.345	2348.	2282.	* 2218	* 494.5	22.6	2868.8	118.8	8.869	* 22.3	2878.3	189.3	9.189	8.837	1.133	57.2	34.6
312	935	8.819	35.255	2343.	2281.	* 2219	* 491.1	23.8	2869.7	188.3	8.869	* 22.7	2871.7	186.6	9.257	8.834	1.182	53.9	31.8
315	994	7.797	35.282	2346.	2212.	* 2227	* 514.8	24.2	2884.8	183.7	8.851	* 23.9	2886.8	182.8	9.784	8.813	1.855	48.8	25.7
316	1895	7.389	35.388	2349.	2288.	* 2227	* 459.4	22.8	2866.8	112.8	8.893	* 21.6	2868.3	118.1	8.874	8.852	1.139	56.8	32.7
317	1145	7.141	35.387	2356.	2217.	* 2219	* 487.8	23.5	2886.9	186.5	8.878	* 23.2	2889.3	184.5	9.483	8.827	1.882	58.8	26.5
319	1298	6.892	35.363	2356.	2284.	* 2216	* 444.5	21.6	2868.6	113.7	8.185	* 21.2	2871.4	111.4	8.786	8.856	1.155	55.6	31.8
321	1337	6.723	35.359	2357.	2281.	* 2238	* 438.8	21.1	2863.9	116.8	8.117	* 20.7	2866.8	113.5	8.586	8.866	1.177	57.3	33.4
322	1337	6.723	35.358	2355.	2199.	* 2211	* 438.5	21.1	2861.9	116.8	8.117	* 20.7	2864.8	113.5	8.587	8.866	1.177	57.3	33.4
328	1337	6.723	35.355	2355.	2194.	* 2284	* 416.9	28.4	2854.8	118.8	8.129	* 28.8	2857.7	116.3	8.344	8.879	1.286	58.1	36.2
323	1393	6.5	35.358	2355.	2282.	* 2298	* 434.4	21.4	2866.4	114.2	8.112	* 21.8	2869.4	111.6	8.717	8.868	1.157	54.9	38.8
324	1498	6.82	35.298	2358.	2189.	* 2222	* 482.7	28.2	2858.4	118.4	8.139	* 19.8	2853.6	115.6	8.263	8.883	1.196	58.8	33.6
985	1774	4.77	35.158	2347.	2198.	* 2283	* 391.1	28.5	2853.6	115.9	8.146	* 28.8	2857.5	112.5	8.333	8.878	1.159	52.1	26.8
986	1974	4.25	35.181	2344.	2178.	* 2282	* 361.8	19.3	2837.8	128.9	8.175	* 18.8	2842.2	117.1	7.959	8.899	1.284	54.6	28.7
989	2576	3.14	34.975	2347.	2195.	* 2199	* 377.8	21.8	2861.2	112.7	8.155	* 28.3	2866.9	187.9	8.889	8.855	1.186	39.8	11.1
912	3231	2.66	34.327	2356.	2196.	* 2216	* 353.7	28.1	2858.4	117.5	8.188	* 19.2	2855.6	111.3	8.829	8.854	1.139	34.9	4.7
915	3476	2.59	34.316	2361.	2288.	* 2227	* 369.7	21.1	2873.3	113.6	8.163	* 28.8	2880.9	187.8	9.384	8.828	1.896	27.6	-3.4
916	3732	2.587	34.318	2364.	2285.	* 2221	* 355.5	28.3	2867.6	117.1	8.179	* 19.2	2875.9	189.9	9.265	8.833	1.125	27.2	-4.7
917	3989	2.49	34.382	2358.	2289.	* 2215	* 377.3	21.6	2876.1	111.3	8.154	* 28.4	2884.8	183.8	10.835	7.998	1.862	17.8	-15.1
919	4398	2.45	34.981	2362.	2213.	* 2218	* 377.2	21.6	2888.1	111.3	8.155	* 28.3	2889.6	183.1	10.488	7.983	1.854	11.3	-23.1
921	4887	2.42	34.388	2364.	2218.	* 2229	* 385.8	22.1	2886.2	189.7	8.147	* 28.6	2896.5	188.8	18.993	7.959	1.831	3.8	-33.1
922	5811	2.43	34.886	2365.	2286.	* 2218	* 354.6	28.3	2868.5	117.2	8.179	* 18.9	2879.6	187.5	18.383	7.984	1.899	6.5	-38.4
925	5179	2.5	34.886	2364.	2287.	* 2224	* 359.9	28.6	2878.4	116.8	8.174	* 19.1	2881.8	186.1	18.681	7.971	1.885	2.4	-35.1
938	5296	2.465	34.886	2365.	2285.	* 2224	* 352.9	28.2	2867.8	117.8	8.182	* 18.7	2878.8	187.5	18.683	7.975	1.899	1.9	-36.1

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
GEOSecs ATLANTIC						
118	2	18 3 73	2140	29 56.8 N	38 24.8 W	
116	3	18 3 73	2443	29 54.8 N	38 22.8 W	4682
116	6	18 3 73	1540	29 51.8 N	38 28.8 W	4617

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU						CALC PARAMETERS P,T=INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARRG) (M/KG)		
		TEMP. (C)	SAL. (P/1000)	TALK (EQ/KG) (E-5)	TIT TCO2 (M/KG) (E-5)	GC TCO2 (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3- (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3- (M/KG) (E-6)	PH			PH	ICP (E-6)
201	17	18.302	38.971	2359.	2078.	* 2692	* 384.0	18.2	1832.9	228.9	8.281	* 18.2	1832.9	228.9	5.237	8.281	2.433	181.0	161.2
202	40	18.310	38.571	2481.	2088.	* 2591	* 292.8	9.8	1822.5	233.7	8.297	* 9.8	1822.6	233.6	5.808	8.295	2.584	188.1	167.0
203	97	18.311	38.537	2392.	2072.	* 2695	* 388.4	18.4	1838.1	223.5	8.278	* 18.4	1838.3	223.3	5.316	8.274	2.391	177.4	156.8
204	188	17.241	38.481	2391.	2075.	* 2117	* 381.9	18.9	1845.0	219.9	8.292	* 18.5	1846.1	219.4	5.387	8.275	2.342	172.9	152.2
206	389	14.679	39.998	2368.	2094.	* 2131	* 329.9	12.4	1895.3	188.2	8.240	* 12.3	1896.3	185.3	5.933	8.272	1.955	137.3	118.8
209	592	12.254	35.668	2345.	2102.	* 2149	* 327.7	13.3	1918.5	178.2	8.235	* 13.2	1919.9	168.9	6.113	8.214	1.766	119.2	97.3
210	600	10.847	35.481	2343.	2132.	* 2198	* 363.3	13.5	1968.5	149.9	8.191	* 13.4	1968.1	148.5	6.828	8.168	1.544	97.9	75.8
211	730	10.329	35.468	2338.	2197.	* 3194	* 423.6	18.3	2007.2	131.5	8.132	* 18.1	2008.8	138.1	7.846	8.185	1.352	79.1	56.8
212	883	8.964	39.428	2340.	2189.	* 2202	* 425.1	19.3	2024.6	129.0	8.127	* 19.8	2026.7	125.3	8.854	8.094	1.201	71.1	48.4
219	995	8.274	39.434	2345.	2189.	* 2219	* 455.8	21.1	2051.7	116.2	8.898	* 20.8	2053.8	114.4	8.688	8.061	1.188	61.2	38.2
217	1141	7.378	35.398	2344.	2189.	* 2288	* 448.8	21.1	2052.7	115.2	8.188	* 20.8	2055.2	113.1	8.618	8.863	1.174	58.6	35.2
218	1191	7.112	39.388	2348.	2178.	* 2216	* 398.7	19.2	2034.8	124.8	8.146	* 18.9	2037.4	121.7	7.913	8.182	1.262	66.8	43.2
219	1248	6.891	39.375	2345.	2187.	* 2283	* 424.7	20.7	2049.5	118.8	8.121	* 20.3	2052.2	114.5	8.432	8.874	1.188	59.2	35.5
220	1299	6.643	39.399	2339.	2179.	* 2288	* 412.8	20.3	2041.1	117.7	8.138	* 19.9	2043.8	115.3	8.294	8.881	1.195	59.5	35.6
221	1338	6.458	39.34	2343.	2188.	* 3228	* 424.2	21.8	2052.1	114.9	8.119	* 20.8	2055.8	112.5	8.533	8.869	1.165	56.2	32.3
222	1385	8.175	39.311	2346.	2174.	* 2286	* 378.2	18.9	2038.3	124.9	8.163	* 18.5	2033.3	122.2	7.746	8.111	1.264	63.5	41.3
223	1433	5.871	35.291	2340.	2185.	* 2198	* 414.4	20.8	2049.5	114.7	8.128	* 20.4	2052.6	112.8	8.473	8.872	1.159	54.9	38.6
587	1441	5.91	35.287	2341.	2186.	* 2192	* 413.7	20.8	2050.5	114.7	8.127	* 20.4	2053.6	112.8	8.468	8.872	1.159	54.8	38.5
224	1481	5.838	39.274	2343.	2165.	* 2214	* 358.2	18.1	2018.0	128.1	8.182	* 17.7	2022.1	125.2	7.473	8.127	1.295	67.6	43.2
688	1506	5.32	35.224	2327.	2168.	* 2218	* 378.9	19.1	2019.7	121.2	8.165	* 18.7	2023.2	118.2	7.848	8.185	1.228	59.8	35.1
689	1698	4.9	35.171	2339.	2173.	* 2191	* 369.6	19.3	2032.0	128.9	8.167	* 18.8	2036.6	117.6	7.988	8.182	1.213	58.8	32.9
618	1814	4.54	35.134	2337.	2181.	* 2198	* 387.8	20.5	2043.6	114.9	8.148	* 20.8	2049.5	111.5	8.353	8.878	1.145	58.7	25.2
811	1948	4.23	35.895	2337.	2188.	* 2198	* 379.3	20.3	2044.2	115.4	8.155	* 19.8	2048.5	111.8	8.319	8.888	1.158	49.7	23.8
619	2239	3.58	35.821	2338.	2185.	* 2198	* 396.9	21.0	2054.9	108.3	8.134	* 21.1	2059.6	104.3	8.977	8.847	1.078	39.8	12.2
616	2389	3.33	34.994	2337.	2178.	* 2294	* 368.9	20.8	2041.5	118.5	8.171	* 19.3	2046.8	111.9	8.347	8.878	1.148	45.1	17.8
617	2933	3.17	34.978	2348.	2179.	* 2288	* 354.6	19.8	2041.6	117.7	9.178	* 19.8	2047.2	112.9	8.330	8.879	1.156	44.3	16.6
619	2689	2.99	34.981	2338.	2183.	* 2284	* 363.1	20.5	2048.4	114.1	8.166	* 19.7	2054.2	109.1	8.689	8.881	1.118	38.9	18.7
619	2841	2.88	34.954	2344.	2192.	* 2218	* 372.4	21.8	2058.4	112.6	8.158	* 20.1	2064.6	107.3	8.956	8.848	1.099	35.5	6.7
620	2991	2.78	34.948	2345.	2194.	* 2284	* 373.2	21.1	2068.9	112.8	8.158	* 20.2	2067.4	106.4	9.099	8.841	1.098	32.9	3.5
621	3142	2.72	34.934	2349.	2196.	* 2218	* 389.8	20.9	2061.7	113.4	8.162	* 20.8	2068.8	107.4	9.123	8.848	1.188	32.1	2.3
622	3293	2.88	34.931	2351.	2210.	* 2218	* 398.4	22.8	2080.8	106.8	8.133	* 21.8	2087.8	108.6	9.912	8.884	1.038	23.5	-5.9
623	3446	2.98	34.919	2358.	2208.	* 2209	* 374.3	21.3	2067.8	111.7	8.157	* 20.3	2074.5	105.2	9.587	8.822	1.077	26.2	-4.7
624	3598	2.95	34.914	2351.	2208.	* 2224	* 388.8	23.8	2075.2	108.8	8.145	* 20.9	2082.9	102.1	9.918	8.884	1.045	21.2	-18.2
628	3981	2.58	34.988	2352.	2281.	* 2223	* 371.8	21.2	2067.5	112.3	8.168	* 20.1	2076.8	104.9	9.828	8.888	1.074	28.8	-12.5
627	4852	2.58	34.984	2354.	2284.	* 2217	* 374.8	21.4	2078.9	111.8	8.157	* 20.2	2079.7	104.1	10.826	7.999	1.066	17.2	-15.9
629	4293	2.493	34.981	2355.	2283.	* 2218	* 367.1	21.8	2068.5	113.5	8.165	* 19.8	2077.7	105.5	9.997	8.881	1.088	16.5	-17.1
629	4354	2.49	34.988	2394.	2286.	* 2221	* 378.7	21.7	2073.7	118.6	8.152	* 20.4	2083.1	102.5	10.425	7.982	1.049	11.4	-22.8
328	4374	2.49	34.898	2343.	2198.	* 2228	* 341.5	19.5	2041.5	118.9	8.191	* 18.3	2051.3	118.4	9.351	8.828	1.129	19.8	-15.4
550	4437	2.478	34.999	2355.	2285.	* 2221	* 373.6	21.4	2071.9	111.3	8.158	* 20.1	2081.8	103.3	10.429	7.982	1.057	10.1	-24.7
333	4587	2.5	34.992	2358.	2215.	* 2217	* 397.9	22.2	2083.7	109.1	8.144	* 20.9	2093.7	100.5	10.927	7.361	1.028	5.8	-30.4

I FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 117 3 21 3 73 0100 30 39.9 N 38 57.8 W
 117 9 21 3 73 1500 38 49.8 N 38 56.8 W 3382

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/100)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATH,T=INSITU*								CALC PARAMETERS P.T=INSITU			DELTA CO3= (CALC)	DELTA CO3= (ARRG)
				TALK (EQ/KG)	TC02 (M/KG)	GC (M/KG)	PC02 (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	CP		
381	9	19.361	36.652	2467.	2070.	* 2988	* 385.4	18.8	1824.3	235.7	8.284	* 18.8	1824.3	235.7	5.286	8.283	2.533	198.5	170.1
382	21	19.373	36.698	2461.	2061.	* 2889	* 299.8	9.8	1813.8	237.4	8.289	* 9.8	1813.8	237.4	5.145	8.289	2.553	192.1	171.7
383	98	19.264	36.678	2487.	2062.	* 2883	* 293.5	9.6	1811.4	241.8	8.297	* 9.6	1811.6	248.8	5.877	8.294	2.589	195.8	174.5
384	138	18.953	36.659	2465.	2073.	* 2186	* 386.1	18.1	1838.7	232.1	8.292	* 18.1	1831.1	231.8	5.283	8.277	2.491	185.8	165.2
385	158	18.786	36.621	2462.	2076.	* 2898	* 311.2	16.3	1837.6	228.1	8.275	* 18.3	1838.8	227.7	5.371	8.278	2.444	181.5	168.8
386	187	18.893	36.529	2395.	2098.	* 2112	* 338.6	11.2	1864.8	214.8	8.251	* 11.2	1865.3	213.5	5.688	8.245	2.296	167.1	146.4
387	258	17.433	36.458	2398.	2094.	* 2121	* 333.2	11.5	1874.8	207.7	8.247	* 11.5	1875.5	207.8	5.784	8.238	2.212	168.1	139.2
388	338	16.685	36.336	2383.	2097.	* 2127	* 334.5	11.9	1884.5	208.7	8.242	* 11.8	1885.4	199.8	5.879	8.231	2.129	152.3	131.2
389	538	13.383	35.973	2363.	2128.	* 2137	* 359.8	13.8	1934.6	171.6	8.288	* 13.7	1935.9	178.4	6.469	8.189	1.792	121.2	99.6
318	638	12.717	35.789	2358.	2132.	* 2164	* 384.5	15.4	1981.5	153.1	8.178	* 15.2	1963.8	153.8	7.888	8.153	1.618	183.8	81.9
311	688	11.985	35.685	2348.	2149.	* 2167	* 411.9	16.9	1988.9	143.2	8.149	* 16.8	1998.4	141.8	7.587	8.125	1.488	91.4	69.3
312	738	11.091	35.511	2344.	2154.	* 2189	* 417.1	17.6	1999.8	137.4	8.141	* 17.4	2006.7	135.9	7.679	8.115	1.415	85.8	62.8
315	798	10.321	35.424	2344.	2168.	* 2288	* 437.7	19.8	2028.3	128.7	8.121	* 18.7	2022.1	127.2	8.897	8.092	1.321	75.8	53.3
316	948	9.829	35.385	2342.	2178.	* 2281	* 468.6	20.3	2036.3	121.5	8.099	* 20.8	2038.1	119.9	8.547	8.068	1.244	68.8	45.5
317	999	9.884	35.387	2338.	2184.	* 2211	* 471.9	21.4	2047.3	115.3	8.087	* 21.1	2049.2	113.7	8.844	8.053	1.176	61.3	38.6
318	949	8.455	35.278	2338.	2186.	* 2217	* 466.8	21.5	2058.6	113.9	8.089	* 21.3	2052.5	112.2	8.838	8.054	1.168	59.4	36.5
319	999	7.864	35.291	2343.	2187.	* 2207	* 445.3	21.8	2058.8	116.8	8.106	* 20.7	2052.2	114.2	8.539	8.069	1.181	68.9	37.8
320	1048	7.554	35.291	2339.	2188.	* 2211	* 453.6	21.6	2053.4	113.8	8.097	* 21.3	2055.6	111.2	8.759	8.058	1.158	57.4	34.3
321	1149	6.972	35.263	2341.	2188.	* 2215	* 437.3	21.2	2052.8	114.8	8.109	* 20.9	2055.2	111.9	8.587	8.066	1.157	57.3	33.8
322	1281	6.149	35.238	2339.	2177.	* 2281	* 398.4	19.9	2058.3	118.8	8.142	* 19.5	2041.1	116.3	8.857	8.054	1.282	68.5	36.7
323	1399	5.552	35.193	2336.	2175.	* 2195	* 398.5	19.9	2037.8	118.8	8.147	* 19.5	2048.1	115.4	8.949	8.054	1.198	58.4	34.2
324	1582	5.288	35.172	2335.	2178.	* 2286	* 375.1	19.4	2038.4	128.2	8.162	* 19.8	2033.7	117.3	7.862	8.184	1.218	59.4	34.9
882	1573	5.168	35.187	2334.	2179.	* 2281	* 396.8	20.5	2042.6	114.9	8.148	* 20.8	2045.9	112.8	8.312	8.088	1.155	53.5	28.8
884	1682	4.647	35.134	2339.	2174.	* 2179	* 387.9	19.4	2034.3	128.2	8.168	* 18.9	2038.1	117.8	7.878	8.184	1.285	57.4	32.3
886	1884	4.168	35.073	2332.	2178.	* 2186	* 365.8	19.6	2032.2	118.2	8.168	* 19.1	2036.4	114.6	8.818	8.096	1.178	53.8	27.3
889	2085	3.561	35.823	2335.	2172.	* 2185	* 355.9	19.5	2033.8	118.7	8.177	* 18.9	2038.4	114.7	8.885	8.097	1.178	51.8	24.7
816	2487	3.126	34.965	2335.	2171.	* 2197	* 346.2	19.3	2032.4	119.3	8.186	* 18.6	2037.9	114.5	8.133	8.098	1.173	46.6	18.9
818	2737	2.968	34.953	2338.	2181.	* 2195	* 368.3	20.2	2045.4	115.3	8.171	* 19.4	2051.4	118.1	8.624	8.064	1.128	39.5	11.8
819	2989	2.853	34.943	2343.	2193.	* 2197	* 376.5	21.2	2068.3	111.5	8.154	* 20.3	2066.8	105.9	9.172	8.038	1.085	32.4	3.1
921	3235	2.773	34.935	2346.	2194.	* 2215	* 371.3	21.8	2068.3	112.7	8.168	* 20.1	2067.3	106.6	9.257	8.034	1.092	30.2	8.1
822	3486	2.714	34.927	2349.	2193.	* 2198	* 361.3	20.5	2057.5	115.8	8.171	* 19.5	2065.2	108.3	9.231	8.035	1.109	28.8	-2.2
824	3553	2.653	34.927	2349.	2191.	* 2198	* 356.7	20.2	2054.6	116.2	8.175	* 19.2	2062.5	109.3	9.182	8.037	1.119	29.8	-2.2

GEOSSECS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 118 2 23 3 73 0728 31 18.2 N 45 38.2 W 4565
 118 6 23 3 73 2002 31 16.9 N 45 33.2 W 4573

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	MEASURED PARAMETERS					CALC PARAMETERS P=(ATH,T=INSITU)					CALC PARAMETERS P,T=INSITU					DELTA CO3- (CALC)	DELTA CO3- (ARRG)	
		TEMP. (C)	SAL. (E-3)	TALK (E-3)	TIT (E-3)	GC TCO2 (E-3)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	PH			ICP (E-6)
201	1	20.25	36.776	2418.	2064.	* 2050	* 297.6	9.5	1806.8	247.7	8.296	* 9.5	1806.8	247.7	5.859	8.296	2.671	282.6	182.3
202	21	20.175	36.777	2416.	2067.	* 2087	* 382.6	9.7	1913.1	244.2	8.296	* 9.7	1813.1	244.2	5.139	8.299	2.633	199.8	178.6
501	57	15.54	36.741	2418.	2055.	* * 295.3	* 9.5	1804.2	245.3	8.297	* 9.5	1804.3	245.2	5.070	8.295	2.641	199.7	179.3	
602	77	19.79	36.725	2409.	2067.	* 2069	* 385.8	9.9	1817.8	239.3	9.265	* 9.8	1818.1	239.1	5.216	8.283	2.574	193.5	173.8
203	83	19.733	36.724	2412.	2053.	* 2079	* 282.8	9.1	1793.3	250.5	9.312	* 9.1	1793.5	250.3	4.908	8.309	2.695	284.7	184.2
204	100	19.791	36.547	2402.	2065.	* * 295.3	* 9.8	1819.9	235.3	8.294	* 9.8	1820.1	235.1	5.123	8.298	2.518	189.2	168.6	
604	118	19.71	36.725	2418.	2062.	* 2056	* 296.2	9.6	1809.2	243.2	8.295	* 9.6	1809.5	242.9	5.111	8.292	2.615	197.1	176.5
205	150	18.268	38.425	2394.	2068.	* 2089	* 250.1	9.8	1817.1	233.1	9.298	* 9.8	1817.5	232.7	5.895	8.293	2.485	186.4	165.7
206	206	17.781	36.424	2390.	2089.	* 2188	* 326.7	11.3	1866.7	211.1	8.252	* 11.2	1867.2	218.6	5.685	8.245	2.248	164.8	143.2
207	305	17.214	36.378	2392.	2057.	* 2128	* 331.5	11.5	1878.4	207.8	9.248	* 11.5	1879.2	206.3	5.781	8.238	2.208	159.8	138.8
605	465	14.52	35.931	2388.	2122.	* 2124	* 365.8	13.8	1934.3	173.9	8.204	* 13.7	1933.4	172.9	6.488	8.188	1.921	124.3	102.8
208	501	14.753	35.995	2378.	2121.	* 2133	* 364.1	13.7	1931.4	175.9	8.206	* 13.6	1932.6	174.8	6.481	8.188	1.845	126.8	104.5
209	600	13.881	35.716	2356.	2133.	* 2167	* 394.5	15.6	1966.4	155.8	8.178	* 15.3	1969.8	153.7	7.187	8.148	1.618	104.8	82.2
210	698	10.718	35.381	2348.	2135.	* 2202	* 468.5	26.8	2629.4	123.6	8.896	* 19.8	2839.9	122.3	8.587	8.878	1.268	71.6	49.4
211	750	9.936	35.255	2339.	2182.	* * 461.8	* 28.9	2644.1	117.6	8.856	* 26.7	2645.6	115.5	8.584	8.866	1.194	63.9	41.4	
212	896	7.558	35.177	2345.	2203.	* 2286	* 481.5	22.9	2871.9	108.2	8.873	* 22.6	2873.7	106.6	9.898	8.641	1.188	54.1	31.3
226	1008	6.52	35.263	2340.	2169.	* 2284	* 441.4	21.5	2854.6	112.9	8.106	* 21.2	2856.8	111.1	8.556	8.856	1.146	57.6	34.5
215	1184	6.384	35.288	2339.	2185.	* 2194	* 423.2	21.8	2649.7	114.4	8.126	* 20.6	2852.8	112.3	8.354	8.878	1.159	58.8	34.6
216	1200	5.883	35.186	2339.	2182.	* 2216	* 486.9	28.5	2645.5	116.8	8.133	* 28.2	2648.1	113.7	8.178	8.868	1.173	58.5	34.9
217	1258	5.573	35.176	2336.	2176.	* 2282	* 393.5	26.1	2848.5	117.5	8.145	* 19.7	2643.3	115.8	8.822	8.896	1.186	59.8	35.8
218	1394	5.294	35.163	2337.	2174.	* 2164	* 381.5	19.7	2835.2	119.1	8.156	* 19.3	2838.3	116.5	7.893	8.183	1.288	59.5	35.3
215	1495	4.562	35.141	2336.	2179.	* 2193	* 398.7	26.4	2843.8	115.6	8.145	* 19.9	2846.3	112.8	8.162	8.888	1.162	54.9	38.4
221	1654	4.428	35.889	2335.	2172.	* 2167	* 367.6	19.6	2833.5	116.9	8.167	* 19.1	2837.3	115.7	7.985	8.182	1.198	55.9	38.8
222	1755	4.198	35.867	2335.	2175.	* 2196	* 378.7	19.9	2838.8	117.1	8.163	* 19.4	2841.9	113.7	8.853	8.894	1.169	52.9	27.5
223	1893	3.996	35.856	2337.	2178.	* 2179	* 376.7	28.8	2641.4	116.6	8.163	* 19.5	2645.6	113.8	8.138	8.898	1.161	51.2	25.5
224	1993	3.823	35.838	2337.	2174.	* 2187	* 358.7	19.5	2835.7	118.9	8.173	* 18.9	2648.1	115.8	7.975	8.898	1.188	52.2	26.2
629	2267	3.48	34.955	2334.	2178.	* 2178	* 351.6	19.3	2831.3	119.3	8.182	* 16.7	2836.2	115.1	8.865	8.896	1.188	56.1	23.4
607	2431	3.28	34.977	2335.	2172.	* 2171	* 358.7	19.5	2833.7	116.6	8.161	* 18.8	2839.1	114.1	6.177	8.867	1.178	46.8	19.4
666	2656	3.87	34.962	2338.	2176.	* 2197	* 356.6	19.6	2838.1	116.2	8.181	* 18.9	2644.8	113.1	8.346	8.879	1.159	43.4	15.2
609	2851	2.97	34.953	2338.	2178.	* 2187	* 353.6	19.9	2841.1	117.1	8.178	* 19.1	2647.4	111.6	8.569	8.867	1.143	39.7	18.9
610	3051	2.82	34.938	2341.	2182.	* 2164	* 354.1	28.8	2845.5	116.5	8.177	* 19.1	2852.2	116.6	8.738	8.899	1.133	36.4	6.9
611	3251	2.71	34.929	2345.	2176.	* * 332.1	* 16.8	2834.8	122.4	8.282	* 18.8	2642.1	115.9	6.393	8.876	1.187	39.3	9.1	
612	3451	2.61	34.928	2339.	2182.	* 2186	* 355.5	28.2	2646.4	115.4	8.175	* 15.3	2854.8	108.8	9.116	8.848	1.113	29.7	-1.2
615	3648	2.46	34.989	2344.	2196.	* 2182	* 361.6	26.7	2855.5	113.8	8.168	* 19.6	2863.5	106.9	9.419	8.826	1.893	25.2	-6.4
617	4051	2.29	34.893	2345.	2188.	* 2196	* 352.2	28.3	2852.3	115.4	8.178	* 19.1	2861.2	107.7	9.551	8.826	1.181	28.6	-12.5
619	4346	2.2	34.864	2356.	2197.	* 2199	* 366.9	26.9	2662.9	113.2	8.169	* 19.6	2872.4	105.8	16.819	7.999	1.873	13.7	-28.5
622	4487	2.22	34.888	2345.	2166.	* 2283	* 339.2	19.6	2847.4	119.8	8.193	* 16.4	2857.4	116.2	9.595	8.816	1.127	17.8	-17.8

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSIDS ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 119 1 25 3 73 1010 31 49.8 N 50 53.8 W
 119 2 25 3 73 1621 31 48.8 N 50 53.5 W 5985

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH, T=INSITU								DELTA						
			SAL. (E-6)	TALK (E-6)	TIT (E-6)	GC (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	AH	PH	CP (E-6)	CO3- (E-6)			
101	5	21.89	36.691	2411.	2058.	*	307.2	9.6	1000.9	247.5	0.286	*	9.6	1000.9	247.5	5.176	0.286	2.662	202.3	102.0	
102	53	20.10	36.751	2419.	2062.	*	291.9	9.3	1002.9	249.7	0.303	*	9.3	1003.1	249.6	5.003	0.301	2.609	204.1	103.7	
103	150	19.13	36.844	2400.	2094.	*	2884	336.1	11.1	1062.2	220.0	0.250	*	11.0	1062.6	220.4	5.693	0.245	2.367	174.3	153.7
106	295	17.32	36.435	2397.	2100.	*	2102	331.0	11.5	1000.0	200.5	0.249	*	11.5	1000.0	207.9	5.770	0.239	2.219	160.6	139.6
107	344	17.00	36.390	2300.	2102.	*	2116	341.7	12.0	1009.2	206.9	0.236	*	11.9	1000.0	200.1	5.961	0.225	2.134	152.5	131.5
108	393	16.50	36.300	2390.	2103.	*	2111	334.3	11.9	1009.6	201.5	0.244	*	11.0	1000.6	200.6	5.003	0.230	2.135	152.7	131.5
109	442	16.10	36.232	2372.	2102.	*	2111	350.0	12.5	1009.5	189.9	0.223	*	12.5	1000.6	180.0	6.266	0.200	2.006	140.6	119.3
116	491	15.40	36.084	2377.	2116.	*	2133	355.0	13.1	1010.9	184.1	0.210	*	13.0	1020.1	102.9	6.300	0.201	1.935	134.2	112.0
111	540	14.69	35.979	2369.	2125.	*	2120	372.3	14.0	1030.2	172.0	0.197	*	13.9	1039.5	171.6	6.620	0.179	1.010	122.5	100.9
112	579	14.17	35.891	2360.	2124.	*	2130	362.9	13.9	1037.6	172.5	0.206	*	13.8	1039.0	171.2	6.527	0.165	1.002	121.0	100.1
115	639	13.06	35.726	2350.	2147.	*	2162	400.4	16.2	1079.5	151.3	0.157	*	16.0	1001.0	150.0	7.335	0.135	1.571	100.0	70.1
116	600	12.24	35.632	2356.	2150.	*	2152	404.5	16.4	1005.6	147.9	0.150	*	16.3	1007.2	146.5	7.350	0.134	1.530	96.1	74.0
117	700	10.10	35.324	2344.	2102.	*	2194	471.4	20.6	2040.9	120.5	0.092	*	20.4	2042.6	119.1	0.640	0.063	1.233	67.7	45.2
110	800	0.17	35.173	2340.	2193.	*	2194	476.2	22.2	2059.7	111.1	0.001	*	21.9	2061.5	109.6	0.959	0.040	1.130	57.2	34.4
119	930	7.6	35.142	2340.	2191.	*	2194	450.4	21.0	2057.2	112.0	0.094	*	21.5	2059.2	110.3	9.737	0.059	1.136	57.4	34.5
120	900	7.1	35.127	2339.	2190.	*	2190	440.9	21.7	2056.5	111.0	0.100	*	21.4	2056.6	110.0	0.655	0.063	1.133	56.7	33.7
121	1000	6.05	35.109	2340.	2107.	*	2190	419.3	21.0	2052.2	113.7	0.123	*	20.7	2054.5	111.7	0.200	0.002	1.150	57.5	34.1
122	1100	5.90	35.174	2343.	2104.	*	2105	402.7	20.3	2046.5	117.1	0.130	*	20.0	2049.1	114.9	0.071	0.093	1.105	59.0	36.2
123	1291	5.45	35.145	2342.	2175.	*	2100	375.0	19.3	2034.1	121.7	0.163	*	16.9	2036.9	119.2	7.690	0.114	1.220	63.1	39.2
201	1564	4.35	35.020	2334.	2172.	*	2179	360.0	19.6	2034.0	110.3	0.166	*	19.2	2037.5	115.4	7.027	0.106	1.104	56.7	32.0
202	1960	3.09	35.013	2334.	2165.	*	2171	345.9	10.0	2023.9	122.3	0.109	*	10.2	2020.3	110.5	7.709	0.113	1.216	56.0	30.0
203	2307	3.40	34.979	2341.	2179.	*	2102	355.7	19.7	2041.0	110.3	0.177	*	19.6	2046.3	113.7	0.203	0.006	1.166	47.2	19.9
204	2765	3.00	34.957	2341.	2101.	*	2101	359.7	19.9	2044.6	117.1	0.176	*	19.1	2050.1	111.6	0.527	0.069	1.146	40.9	12.4
205	3164	2.05	34.934	2345.	2107.	*	2166	350.1	20.2	2050.7	116.1	0.174	*	19.3	2057.7	110.0	0.097	0.051	1.127	34.5	4.6
206	3562	2.51	34.913	2345.	2101.	*	2109	340.2	19.4	2042.0	119.6	0.152	*	16.5	2050.0	112.6	0.030	0.054	1.152	32.6	0.7
207	3962	2.32	34.895	2353.	2194.	*	2109	350.3	20.2	2057.0	116.9	0.102	*	19.0	2065.0	109.2	9.396	0.027	1.117	23.4	-9.4
208	4364	2.21	34.970	2354.	2201.	*	2207	362.3	20.9	2066.7	113.4	0.169	*	19.7	2076.2	105.1	10.053	7.990	1.075	13.6	-20.7
209	4769	2.15	34.960	2362.	2207.	*	2200	359.1	20.0	2071.4	114.0	0.173	*	19.4	2001.9	105.7	10.320	7.906	1.000	0.2	-27.0
216	5175	2.10	34.050	2361.	2205.	*	2206	357.0	20.7	2069.0	115.4	0.175	*	19.2	2000.4	105.4	16.652	7.973	1.070	1.6	-36.0
212	5330	2.19	34.063	2360.	2207.	*	2200	363.6	21.0	2072.4	113.6	0.160	*	19.5	2004.1	103.4	16.996	7.959	1.057	-3.1	-41.4
216	5543	2.24	34.963	2360.	2206.	*	2210	362.0	20.9	2070.9	114.2	0.170	*	19.3	2003.1	103.6	11.151	7.953	1.059	-6.3	-45.5
221	5754	2.24	34.066	2365.	2200.	*	2210	356.6	20.6	2071.3	116.1	0.177	*	19.0	2004.1	105.0	11.190	7.951	1.073	-0.7	-40.7

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSecs ATLANTIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 129 1 27 3 73 0511 33 16.0 N 56 33.8 W 5374
 128 4 27 3 73 1352 33 14.2 N 56 34.8 W

GC CO2 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATH,T=IN9ITU							CALC PARAMETERS P,T=INSITU			DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ANAL) (M/KG)		
			SAL. (0/00)	TALK (EQ/KG) (E-6)	TIT TC02 (M/KG) (E-6)	* GC TC02 (M/KG) (E-6)	* PCO2 (ATM) (M/KG) (E-6)	* H2CO3 (M/KG) (E-6)	* HCO3- (M/KG) (E-6)	* CO3= (M/KG) (E-6)	PH	* H2CO3 (M/KG) (E-6)	* HCO3- (M/KG) (E-6)	* CO3= (M/KG) (E-6)	PH			PH	[CP (E-6)
481	3	18.84	36.417	2385.	2852.	* 2874	* 285.7	9.7	1818.5	231.8	8.382	* 9.7	1818.5	231.8	4.991	8.382	2.474	186.4	166.1
482	20	18.82	36.417	2382.	2854.	* 2869	* 251.5	9.9	1815.7	228.4	8.294	* 9.9	1815.7	228.4	5.888	8.293	2.438	182.9	162.4
483	78	18.82	36.417	2383.	2847.	* 2874	* 201.2	9.6	1863.8	233.7	8.387	* 9.5	1864.8	233.5	4.968	8.384	2.493	187.7	167.2
484	153	17.98	36.483	2382.	2854.	* 2881	* 291.1	9.9	1815.6	228.9	8.295	* 9.9	1816.8	228.1	5.134	8.298	2.434	181.9	161.2
485	227	17.93	36.381	2379.	2873.	* 2899	* 315.3	18.9	1848.3	213.9	9.265	* 18.8	1848.9	213.3	5.538	8.297	2.273	166.6	145.7
486	382	17.18	36.358	2378.	2888.	* 2118	* 338.4	11.5	1869.9	284.5	8.247	* 11.5	1878.7	283.8	5.794	8.237	2.172	156.6	135.6
487	452	16.82	36.178	2368.	2181.	* 2121	* 351.9	12.7	1908.5	187.8	8.221	* 12.6	1901.5	186.9	6.289	8.287	1.982	138.9	117.6
488	582	14.45	35.988	2359.	2119.	* 2138	* 365.8	13.8	1928.7	172.4	8.283	* 13.7	1929.9	171.3	6.538	8.185	1.883	122.5	108.9
489	882	12.74	35.649	2341.	2131.	* 2157	* 399.5	16.8	1984.9	158.2	8.162	* 15.8	1986.2	148.9	7.235	8.141	1.556	99.2	77.3
418	652	11.68	35.586	2333.	2151.	* 2181	* 444.9	18.4	1999.9	132.7	8.117	* 18.3	2001.3	131.4	8.862	8.094	1.368	81.2	59.2
411	782	10.81	35.361	2331.	2162.	* 2188	* 457.4	19.6	2017.9	124.5	8.183	* 19.4	2019.4	123.1	8.367	8.877	1.277	72.4	58.2
412	881	9.85	35.216	2322.	2174.	* 2209	* 484.6	21.9	2048.6	111.5	8.874	* 21.7	2042.2	118.1	9.827	8.844	1.136	58.9	36.8
415	988	7.25	35.894	2326.	2194.	* 2283	* 588.2	24.1	2088.8	102.8	8.856	* 23.8	2069.8	108.5	9.988	8.822	1.833	47.9	25.8
418	1346	4.98	35.859	2318.	2183.	* 2187	* 589.1	28.3	2828.6	114.8	9.144	* 28.8	2831.5	111.5	8.882	8.892	1.146	54.9	38.8
419	1447	4.55	35.841	2315.	2169.	* 2178	* 485.5	21.5	2838.8	108.7	9.126	* 21.8	2841.9	106.1	8.499	9.871	1.898	48.6	24.1
421	1658	4.223	35.828	2319.	2159.	* 2173	* 357.7	19.2	2816.7	119.1	8.174	* 18.7	2828.4	115.9	7.746	8.111	1.198	56.5	31.5
422	1788	4.177	35.818	2316.	2168.	* 2182	* 374.9	20.1	2825.5	114.4	8.155	* 19.6	2829.1	111.2	8.127	8.898	1.142	51.3	26.2
423	1788	4.898	35.811	2328.	2154.	* 2172	* 351.5	18.9	2814.9	128.2	9.181	* 18.5	2818.7	116.8	7.698	8.114	1.199	56.5	31.1
424	1881	4.85	35.812	2316.	2162.	* 2168	* 377.7	20.4	2828.4	113.2	8.152	* 19.9	2832.3	109.9	8.264	8.883	1.127	49.8	23.5
181	1888	3.93	35.883	2319.	2151.	* 2182	* 344.7	18.7	2811.8	121.3	8.188	* 18.2	2815.2	117.6	7.672	8.115	1.287	56.8	38.2
183	2188	3.68	34.988	2321.	2178.	* 2167	* 388.2	28.8	2837.6	111.5	8.149	* 28.2	2842.3	107.5	8.617	8.865	1.182	42.8	16.2
184	2386	3.46	34.976	2322.	2169.	* 2163	* 363.1	28.8	2838.8	115.8	8.166	* 19.3	2835.2	118.4	8.431	8.874	1.132	43.7	16.4
186	2786	3.28	34.952	2322.	2178.	* 2175	* 369.4	28.7	2837.3	112.1	8.159	* 19.9	2843.3	106.9	8.988	8.858	1.095	39.7	7.1
187	2966	2.95	34.942	2324.	2154.	* 2188	* 349.5	19.6	2827.7	116.6	8.188	* 18.8	2834.3	118.9	8.638	8.864	1.136	37.5	8.2
188	3167	2.88	34.931	2328.	2168.	* 2171	* 348.4	19.7	2831.6	116.8	8.181	* 18.8	2838.6	118.6	8.763	8.857	1.133	34.8	4.8
189	3388	2.53	34.922	2325.	2168.	* 2183	* 352.5	28.1	2832.9	115.8	8.176	* 19.1	2848.4	108.6	9.846	8.844	1.111	38.2	-8.4
116	3598	2.58	34.913	2329.	2172.	* 2198	* 351.5	28.1	2836.8	115.1	8.177	* 19.1	2844.7	108.2	9.184	8.837	1.108	27.4	-4.8
111	3788	2.41	34.984	2326.	2166.	* 2185	* 342.9	19.7	2829.6	116.7	8.186	* 18.6	2838.8	109.4	9.165	8.838	1.119	25.9	-6.2
112	4048	2.31	34.899	2333.	2182.	* 2182	* 363.2	28.9	2849.4	111.7	8.164	* 19.7	2858.2	184.1	9.868	8.886	1.065	17.2	-15.9
115	4292	2.27	34.891	2333.	2181.	* 2199	* 368.3	28.8	2847.9	112.3	8.167	* 19.5	2857.3	184.2	10.828	7.999	1.865	13.8	-28.3
118	4545	2.242	34.883	2339.	2188.	* 2209	* 364.8	21.8	2855.1	111.9	8.164	* 19.7	2864.9	183.4	10.325	7.988	1.857	9.3	-23.7
117	4888	2.28	34.874	2348.	2184.	* 2199	* 391.6	28.3	2849.8	114.7	8.178	* 19.8	2859.5	185.5	10.238	7.998	1.878	7.6	-28.5
118	5653	2.19	34.868	2343.	2192.	* 2216	* 364.2	21.1	2858.9	112.8	8.163	* 19.6	2869.9	182.5	10.887	7.966	1.848	8.6	-36.5
119	5388	2.18	34.866	2343.	2189.	* 2214	* 357.1	28.7	2854.6	113.8	8.172	* 19.2	2866.2	183.6	10.866	7.964	1.859	-2.4	-48.8
122	5435	2.195	34.863	2348.	2197.	* 2212	* 365.1	21.1	2863.8	112.1	8.165	* 19.6	2875.6	181.8	11.191	7.951	1.841	-6.3	-45.8
125	5493	2.28	34.862	2345.	2193.	* 2223	* 362.1	28.9	2859.5	112.6	8.167	* 19.4	2871.4	182.2	11.178	7.952	1.844	-6.9	-45.9
138	5548	2.284	34.863	2346.	2198.	* 2284	* 372.2	21.5	2866.1	118.4	8.157	* 19.9	2878.1	188.8	11.516	7.939	1.822	-18.8	-49.2

115

115

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
211	1	30 3 73	1849	35 59.4 N	67 59.8 W	4800
212	2	30 3 73	2050	35 59.7 N	67 59.4 W	4802
213	3	31 3 73	0200	35 59.3 N	68 0.8 W	4933

GC T002 VALUES ARE NOT USED FOR COMPUTATION

SAMP NO	DEPTH (M)	MEASURED PARAMETERS			CALC. PARAMETERS P-T=INSITU								DELTA CO3= (M/KG)	DELTA CO3= (ARRG) (M/KG)					
		TEMP. (C)	SAL. (E-6)	TIT (E-6)	T002 (E-6)	GC (E-6)	P002 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)			HC03- (E-6)	CO3= (E-6)	AM	PH	CP (E-6)
216	55	19.06	36.427	2400	2059	2061	291.9	9.6	1011.1	230.3	3.299	9.6	1011.2	230.1	5.046	0.297	2.543	192.6	172.1
217	152	19.06	36.428	2397	2051	2064	284.6	9.4	1000.2	241.4	0.307	9.4	1000.6	241.8	4.907	0.302	2.574	194.9	174.2
218	200	18.54	36.434	2392	2067	2064	305.2	10.2	1029.5	227.2	9.201	10.2	1030.1	226.7	5.320	0.274	2.422	180.2	159.5
219	299	18.07	36.468	2414	2117	2085	347.6	11.0	1099.7	209.5	0.237	11.7	1096.5	200.7	5.933	0.227	2.231	161.6	140.6
201	349	17.77	36.462	2399	2096	2110	329.5	11.3	1072.0	212.7	0.253	11.2	1072.9	211.0	5.743	0.241	2.264	164.3	143.3
203	499	16.79	36.321	2393	2007	2120	300.5	10.9	1062.1	214.0	0.273	10.0	1063.5	212.7	5.542	0.256	2.255	164.2	142.0
204	601	15.21	36.030	2373	2130	2141	304.7	14.2	1043.2	172.6	0.107	14.1	1044.6	171.2	6.010	0.166	1.009	121.0	100.1
205	702	13.10	35.666	2361	2199	2190	430.6	17.0	1090.0	146.0	0.130	16.9	1097.5	144.6	7.704	0.113	1.912	94.2	72.1
207	953	10.56	35.352	2348	2170	2201	461.1	19.0	1032.7	125.5	0.103	19.5	1034.5	124.0	8.474	0.072	1.295	72.1	49.6
200	963	9.35	35.249	2339	2190	2209	497.7	22.1	1055.2	112.7	0.069	21.9	1057.0	111.1	9.225	0.035	1.148	50.0	36.1
210	1004	7.55	35.097	2335	2109	2200	464.0	22.1	1056.6	110.2	0.000	21.0	1050.7	109.4	0.917	0.050	1.116	55.1	32.0
211	1104	5.91	35.035	2336	2101	2195	409.7	20.7	1045.5	114.0	0.131	20.3	1047.9	112.7	0.140	0.009	1.150	50.3	34.9
212	1255	4.99	35.021	2329	2179	2109	395.4	20.6	1040.6	113.7	0.140	20.2	1043.3	111.4	0.207	0.092	1.144	55.6	31.7
225	1407	4.65	35.012	2320	2172	2176	305.3	20.3	1036.0	114.9	0.149	19.9	1039.0	112.3	0.039	0.095	1.152	55.1	30.0
226	1550	4.30	34.994	2325	2170	2177	302.5	20.4	1035.5	114.1	0.150	19.9	1030.0	111.2	0.122	0.090	1.141	52.7	27.9
326	1631	4.23	34.904	2320	2164	2179	357.6	19.2	1024.9	119.9	0.176	10.7	1020.5	116.0	7.695	0.114	1.197	57.5	32.5
301	2133	3.74	34.967	2327	2164	2170	354.9	19.4	1025.9	110.7	0.177	10.0	1030.7	114.6	0.036	0.095	1.174	50.4	24.0
303	2423	3.53	34.967	2329	2166	2170	352.1	19.4	1020.0	110.6	0.100	10.7	1033.4	113.9	0.190	0.000	1.160	46.0	19.4
304	2566	3.42	34.962	2330	2164	2101	344.7	19.0	1024.5	120.4	0.100	10.3	1030.2	115.4	0.154	0.009	1.103	46.0	10.9
305	2714	3.30	34.950	2320	2100	2100	355.3	19.7	1031.5	116.0	0.175	19.0	1037.5	111.6	0.505	0.070	1.144	41.3	13.0
306	2861	3.14	34.940	2331	2170	2101	351.6	19.6	1032.9	117.4	0.179	10.0	1039.2	111.9	0.540	0.069	1.147	40.0	11.1
307	3011	3.04	34.943	2330	2169	2109	350.0	19.6	1032.0	117.4	0.101	10.0	1030.0	111.6	0.633	0.064	1.143	37.9	0.6
300	3150	2.00	34.934	2332	2174	2169	355.0	20.0	1030.3	115.7	0.175	19.1	1045.2	109.7	0.067	0.052	1.123	34.2	4.4
309	3307	2.75	34.920	2329	2100	2170	346.0	19.6	1031.0	117.4	0.104	10.7	1030.3	111.0	0.005	0.055	1.136	33.7	3.3
310	3456	2.61	34.920	2333	2100	2190	332.0	10.9	1020.0	121.0	0.199	10.0	1035.0	114.2	0.609	0.065	1.169	35.0	4.1
311	3605	2.52	34.912	2332	2171	2196	343.2	19.6	1034.0	117.4	0.107	10.6	1042.0	110.4	0.909	0.046	1.130	29.3	-2.1
312	3755	2.42	34.909	2335	2175	2109	351.7	20.2	1042.6	115.2	0.170	19.1	1050.0	100.0	0.312	0.031	1.105	25.0	-7.1
315	3905	2.39	34.902	2336	2170	2192	349.2	20.1	1042.1	115.0	0.100	19.0	1050.0	100.3	0.379	0.020	1.100	23.3	-9.3
316	4056	2.4	34.899	2330	2170	2196	345.3	19.0	1041.2	117.0	0.105	10.7	1050.2	109.1	0.402	0.027	1.116	22.1	-11.1
317	4207	2.31	34.895	2341	2102	2196	347.0	20.0	1045.5	116.5	0.103	10.0	1054.0	100.3	0.572	0.019	1.100	19.2	-14.6
318	4350	2.29	34.892	2343	2102	2192	343.1	19.0	1044.5	117.0	0.100	10.6	1054.2	109.3	0.600	0.019	1.117	17.9	-16.4
319	4500	2.27	34.889	2342	2104	2100	349.0	20.1	1047.9	116.0	0.101	10.9	1057.9	107.2	0.000	0.000	1.097	13.7	-21.2
321	4661	2.20	34.907	2345	2109	2170	354.3	20.4	1053.7	114.9	0.176	19.1	1063.9	106.0	10.152	7.993	1.004	10.2	-25.3
327	4762	2.3	34.900	2342	2104	2203	349.0	20.2	1047.0	116.1	0.100	10.0	1050.3	106.9	10.139	7.994	1.093	9.6	-26.3
323	4825	2.26	34.893	2340	2109	2211	340.1	20.1	1052.2	116.7	0.103	10.7	1062.9	107.4	10.130	7.994	1.090	9.1	-27.0
332	4866	2.3	34.902	2349	2195	2200	360.2	20.0	1060.4	113.9	0.170	19.4	1071.0	104.6	10.479	7.900	1.070	5.0	-30.6
324	4899	2.20	34.804	2349	2193	2195	355.0	20.5	1057.5	115.0	0.176	19.1	1060.3	105.6	10.377	7.904	1.000	6.2	-30.3

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

Table 2

The Pacific Ocean

DATE REPORT

STATION	CAST	DATE	TIME	DEPTH	LONGITUDE	SOT DEPTH
201	1	25	8 73	1636	3.3 N 127 53.8 W	4823
201	4	26	8 73	2982	34 3.2 N 127 53.1 W	4634
201	6	26	8 73	2082	34 3.5 N 127 58.8 W	4716
201	10	27	9 73	1441	34 7.5 N 128 8.8 W	4688

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0-00)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATH,T=INSITU						CALC PARAMETERS P,T=INSITU			DELTA C03= (CALC)	DELTA C03= (ARRG)		
				TALK (0/KG)	TIT (M/KG)	GC (E-6)	TC02 (M/KG)	TC02 (E-6)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)			CO3= (M/KG)	PH
1001	1	17.68	33.285	2228.	1585.	2886	348.3	12.2	1799.7	173.1	8.215	12.2	1799.7	173.1	6.837	8.219	1.679	127.7	187.3
1004	90	12.53	33.880	2225.	1982.	*	284.2	11.5	1800.2	178.3	8.290	11.5	1800.4	178.1	5.293	8.276	1.650	123.8	183.1
1005	143	9.78	33.291	2228.	2058.	*	366.3	16.3	1905.3	120.4	8.175	16.3	1905.6	120.1	6.763	8.178	1.258	81.3	68.3
1006	208	8.77	33.786	2256.	2126.	*	498.8	22.9	2062.6	180.5	8.856	22.9	2063.0	180.1	9.936	8.849	8.992	52.8	31.7
1007	261	7.87	33.568	2275.	2171.	* 2184	587.8	27.3	2056.7	86.4	7.958	27.8	2057.2	86.8	10.461	7.988	8.856	38.2	16.9
1005	383	6.53	34.831	2293.	2266.	*	1836.6	51.5	2163.3	51.2	7.758	51.3	2164.8	51.8	18.882	7.743	8.589	2.2	-19.4
1010	444	6.00	34.188	2388.	2284.	* 2316	1849.1	53.1	2188.7	58.3	7.753	52.8	2181.4	49.8	18.394	7.735	8.498	8.5	-21.3
1012	553	5.88	34.152	2318.	2321.	*	1268.8	56.2	2213.6	41.2	7.672	56.8	2214.4	48.6	22.426	7.649	8.487	-9.6	-31.6
1013	616	4.88	34.223	2337.	2345.	*	1328.9	59.5	2235.4	48.1	7.657	59.2	2236.3	39.5	23.346	7.632	8.397	-11.1	-33.4
1014	677	4.88	34.291	2352.	2346.	* 2367	1184.8	62.5	2238.7	44.8	7.785	62.1	2239.8	44.1	21.858	7.677	8.443	-7.1	-29.5
1015	728	4.665	34.323	2356.	2353.	* 2388	1289.4	64.1	2245.1	43.8	7.696	63.7	2246.2	43.1	21.574	7.666	8.434	-8.5	-31.8
1016	758	4.32	34.333	2357.	2364.	* 2379	1383.5	69.4	2253.8	48.8	7.664	69.8	2254.9	48.8	23.287	7.633	8.483	-11.8	-34.4
1017	789	4.483	34.358	2363.	2369.	* 2381	1298.8	69.8	2258.8	41.2	7.669	68.6	2268.8	48.4	23.188	7.636	8.487	-11.7	-34.4
1018	861	4.28	34.393	2372.	2378.	* 2395	1284.7	69.2	2267.5	41.3	7.671	68.7	2268.8	48.5	23.144	7.636	8.488	-12.2	-35.1
482	892	4.178	34.487	2377.	2388.	* 2484	1256.2	67.7	2278.8	42.3	7.681	67.2	2271.3	41.4	22.678	7.644	8.418	-11.5	-34.5
483	942	4.828	34.424	2377.	2366.	*	1117.2	68.5	2258.7	46.8	7.729	68.8	2268.2	45.8	28.392	7.691	8.462	-7.6	-38.7
485	1067	3.668	34.463	2393.	2373.	* 2488	1832.4	56.7	2266.1	58.3	7.763	56.1	2267.8	49.8	19.895	7.719	8.496	-5.4	-28.9
487	1216	3.296	34.583	2488.	2378.	* 2412	943.8	52.5	2265.4	54.1	7.799	51.9	2265.5	52.7	17.883	7.798	8.533	-3.1	-27.8
489	1359	2.928	34.533	2414.	2393.	* 2422	1885.9	56.7	2289.2	51.8	7.774	56.8	2287.6	45.4	19.218	7.716	8.581	-7.9	-32.3
410	1498	2.738	34.551	2419.	2393.	*	962.4	54.7	2285.4	52.9	7.792	53.9	2287.9	51.2	18.684	7.738	8.519	-7.1	-31.8
412	1641	2.436	34.578	2416.	2383.	*	988.1	51.7	2275.7	55.6	7.817	58.8	2278.5	53.6	17.787	7.758	8.543	-6.1	-31.3
416	1793	2.222	34.587	2438.	2389.	* 2485	843.7	48.8	2281.1	59.1	7.845	47.5	2284.3	56.8	16.928	7.772	8.576	-4.4	-38.1
418	1943	2.882	34.683	2439.	2385.	*	762.8	44.3	2275.9	64.7	7.888	43.4	2279.5	62.2	15.544	7.888	8.631	-8.6	-26.7
428	2898	1.969	34.623	2448.	2383.	*	741.9	43.3	2273.6	66.1	7.898	42.3	2277.5	63.2	15.382	7.913	8.642	-1.8	-27.6
421	2247	1.868	34.638	2443.	2386.	* 2411	748.4	43.4	2276.4	66.2	7.839	42.3	2288.5	63.1	15.574	7.888	8.641	-2.7	-29.7
422	2396	1.786	34.638	2445.	2386.	*	727.7	42.8	2276.1	67.1	7.886	41.6	2288.6	63.8	15.537	7.889	8.648	-3.6	-31.1
423	2545	1.728	34.645	2447.	2389.	* 2418	732.5	43.2	2279.1	66.7	7.983	42.8	2283.8	63.2	15.857	7.888	8.642	-5.8	-33.8
424	2632	1.657	34.652	2445.	2388.	*	736.2	43.5	2278.3	66.2	7.981	42.2	2283.2	62.6	16.182	7.791	8.636	-8.8	-36.5
683	3166	1.537	34.665	2448.	2384.	* 2398	557.1	33.1	2237.1	83.8	8.813	31.7	2243.4	78.9	12.991	7.886	8.882	2.8	-27.4
684	3314	1.518	34.678	2445.	2387.	*	588.4	34.5	2241.8	88.7	7.996	33.1	2248.3	75.7	13.789	7.863	8.769	-2.3	-32.9
685	3466	1.492	34.674	2446.	2365.	* 2383	611.8	36.3	2251.3	77.3	7.975	34.8	2258.8	72.2	14.595	7.936	8.734	-7.7	-38.8
688	3914	1.481	34.681	2448.	2388.	*	673.6	40.1	2268.7	71.2	7.936	38.3	2276.1	65.7	16.695	7.777	8.688	-28.8	-52.8
683	4053	1.490	34.682	2444.	2356.	*	579.9	34.5	2248.8	88.7	7.996	32.8	2248.7	74.5	14.781	7.833	8.758	-13.2	-46.6
612	4483	1.517	34.683	2432.	2345.	* 2367	581.8	34.5	2238.5	88.8	7.993	32.7	2239.8	73.3	15.278	7.816	8.745	-19.2	-53.9
623	4686	1.543	34.684	2442.	2349.	* 2358	559.2	33.2	2232.7	83.1	8.811	31.3	2241.9	75.8	15.852	7.322	8.771	-20.9	-56.7

CARBONATE REPORT

GEOSIDS PACIFIC STATION	CST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
202	1	30 8 73	0645	33 5.8 N	139 34.4 W	4998
202	4	31 9 73	0413	33 9.7 N	139 35.4 W	5137
202	7	31 9 73	2321	33 5.4 N	139 37.4 W	4994
202	10	1 9 73	2349	33 9.5 N	139 36.3 W	4994

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU								CALC PARAMETERS P,T=INSITU						
		TEMP. (C)	SAL. (8/00)	TALK (EQ/KG)	TIT (E-6)	TC02* (M/KG)	GC (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AH	PH	ICP (E-6)	DELTA CO3- (M/KG)	DELTA CO3= (M/KG)
701	7	21.751	34.646	2366.	2003.	2020.	2020.	342.4	10.8	1777.7	214.7	8.243	10.6	1777.7	214.7	5.722	6.242	2.181	169.3	148.0
703	77	17.129	34.564	2293.	2002.	2020.	2020.	291.0	10.3	1786.5	203.2	8.200	10.3	1786.7	203.0	5.203	8.204	2.077	150.9	138.2
704	101	16.339	34.572	2290.	1995.	2031.	2031.	271.0	9.0	1773.4	209.0	8.311	9.8	1773.7	209.6	4.926	8.307	1.224	163.3	142.5
708	202	11.620	34.149	2267.	2007.	2070.	2070.	345.1	14.4	1693.6	140.9	8.207	14.4	1694.1	140.5	5.314	8.208	1.487	101.4	90.3
711	311	9.412	34.103	2277.	2104.	2130.	2130.	394.6	17.7	1966.4	123.0	8.151	17.7	1961.1	125.2	7.252	9.140	1.252	77.2	55.8
715	400	7.857	34.806	2203.	2159.	2191.	2191.	512.0	24.3	2037.4	97.3	8.846	24.2	2030.2	98.7	9.313	8.831	8.964	47.9	26.2
716	581	5.615	33.900	2297.	2210.	2253.	2253.	657.4	33.7	2110.7	73.0	7.940	33.5	2111.6	72.9	12.805	7.921	8.720	23.2	1.2
717	576	5.365	34.827	2309.	2302.	2308.	2308.	997.8	51.6	2179.1	51.4	7.771	51.4	2189.0	50.7	17.862	7.740	8.506	0.4	-21.7
718	627	4.727	34.654	2324.	2300.	2327.	2327.	1004.3	53.2	2190.5	50.4	7.760	52.9	2197.5	49.6	18.070	7.743	8.439	-1.1	-23.4
719	653	4.890	34.132	2329.	2326.	2326.	2326.	1284.0	63.3	2219.4	43.3	7.695	63.0	2220.4	42.6	21.405	7.660	8.425	-0.3	-30.7
721	744	4.496	34.231	2346.	2340.	2402.	2402.	1244.8	66.3	2239.7	42.8	7.692	66.8	2240.8	41.3	22.323	7.631	8.414	-18.5	-33.8
723	895	3.962	34.341	2371.	2373.	2402.	2402.	1231.9	66.9	2263.6	42.5	7.690	60.5	2263.8	41.6	22.302	7.650	8.418	-11.4	-34.4
401	937	3.696	34.347	2379.	2384.	2413.	2413.	1252.3	68.7	2273.6	41.7	7.601	60.2	2275.0	40.7	22.010	7.642	8.410	-12.6	-35.8
724	946	3.091	34.300	2370.	2387.	2402.	2402.	1302.5	70.3	2273.5	40.5	7.605	70.5	2276.9	39.6	23.674	7.626	8.399	-13.8	-37.8
402	1023	3.405	34.407	2390.	2383.	2412.	2412.	1152.6	63.7	2274.3	45.0	7.710	63.2	2275.9	43.9	21.220	7.673	8.443	-10.2	-33.6
403	1125	3.311	34.455	2390.	2392.	2417.	2417.	1141.3	63.5	2283.8	45.5	7.721	62.9	2284.8	44.3	21.106	7.674	8.448	-10.6	-34.3
404	1215	3.129	34.402	2401.	2385.	2426.	2426.	1049.2	50.7	2277.2	49.0	7.753	50.1	2279.2	47.7	19.732	7.705	8.402	-8.1	-32.8
405	1313	2.960	34.505	2410.	2399.	2402.	2402.	1080.5	61.3	2290.3	47.4	7.741	60.6	2292.4	46.8	20.681	7.600	8.465	-18.7	-34.9
406	1421	2.701	34.527	2410.	2391.	2402.	2402.	1015.6	57.6	2293.2	50.3	7.700	50.8	2295.5	48.7	19.518	7.710	8.492	-9.8	-33.5
407	1519	2.603	34.540	2419.	2394.	2423.	2423.	965.4	55.1	2280.3	52.0	7.790	54.3	2280.9	50.8	18.740	7.727	8.515	-7.7	-32.5
408	1614	2.440	34.501	2422.	2401.	2402.	2402.	992.3	57.8	2292.8	51.2	7.770	56.1	2293.5	49.4	19.432	7.711	8.500	-18.1	-35.2
409	1717	2.201	34.570	2429.	2400.	2402.	2402.	973.3	50.2	2297.7	52.1	7.797	55.3	2300.6	50.1	19.249	7.716	8.507	-18.4	-35.0
1002	1719	2.20	34.501	2434.	2390.	2402.	2402.	900.7	50.9	2290.8	57.2	7.820	50.0	2293.8	50.8	17.455	7.750	8.550	-5.5	-30.9
1003	1739	2.34	34.502	2427.	2402.	2402.	2402.	956.3	55.3	2293.9	52.0	7.793	54.4	2296.9	50.8	18.990	7.721	8.515	-9.9	-35.4
1004	1759	2.21	34.505	2432.	2410.	2402.	2402.	979.5	56.7	2301.5	51.0	7.704	53.0	2304.5	49.7	19.440	7.711	8.504	-11.2	-36.7
1005	1770	2.10	34.507	2430.	2401.	2402.	2402.	925.6	53.7	2293.0	54.4	7.807	52.7	2295.1	52.4	18.465	7.734	8.531	-8.7	-34.3
1006	1796	2.16	34.591	2444.	2405.	2402.	2402.	860.8	49.9	2296.6	50.5	7.840	49.8	2299.7	50.3	17.144	7.766	8.571	-4.9	-30.6
1007	1817	2.14	34.592	2437.	2401.	2402.	2402.	877.4	50.9	2292.0	57.2	7.830	56.8	2296.0	50.6	17.563	7.755	8.557	-6.5	-32.2
410	1820	2.140	34.592	2431.	2390.	2423.	2423.	896.1	52.0	2290.1	55.9	7.820	51.1	2293.3	53.7	17.971	7.745	8.544	-7.8	-33.5
1008	1837	2.11	34.595	2437.	2407.	2402.	2402.	918.2	53.4	2290.6	54.0	7.011	52.4	2302.6	52.5	18.309	7.735	8.532	-9.2	-34.9
1009	1857	2.11	34.597	2440.	2407.	2402.	2402.	890.3	52.2	2290.7	56.1	7.821	51.2	2301.9	53.0	16.021	7.744	8.546	-8.8	-33.9
1010	1876	2.04	34.600	2430.	2411.	2402.	2402.	932.7	55.5	2302.5	53.0	7.795	54.5	2305.7	50.0	19.151	7.710	8.515	-11.3	-37.2
415	2132	1.070	34.621	2434.	2306.	2411.	2411.	790.8	46.3	2277.7	62.0	7.871	45.2	2281.5	59.2	16.442	7.704	8.601	-5.4	-32.1
410	2435	1.029	34.640	2440.	2301.	2401.	2401.	724.8	42.7	2271.3	67.0	7.906	41.5	2275.0	63.7	15.570	7.007	8.647	-4.1	-31.0
1011	3005	1.54	34.663	2451.	2371.	2402.	2402.	617.0	30.7	2257.4	76.9	7.972	35.3	2263.2	72.5	14.091	7.051	8.737	-1.7	-31.3
1012	3025	1.53	34.664	2447.	2380.	2402.	2402.	679.7	40.4	2260.9	70.0	7.933	30.9	2274.5	66.5	15.406	7.010	8.676	-8.8	-37.6
424	3043	1.542	34.663	2446.	2379.	2390.	2390.	679.0	40.3	2267.9	70.7	7.933	30.9	2273.6	66.5	15.912	7.009	8.675	-8.2	-37.9
1013	3045	1.54	34.605	2450.	2300.	2402.	2402.	605.2	39.5	2200.4	72.2	7.942	30.1	2274.1	67.0	15.177	7.019	8.609	-6.9	-36.6
101	3049	1.535	34.663	2444.	2371.	2402.	2402.	640.2	30.5	2259.1	73.4	7.952	37.1	2264.9	69.6	14.051	7.020	8.701	-5.7	-35.4
1014	3065	1.53	34.065	2450.	2375.	2402.	2402.	640.9	30.1	2262.4	74.5	7.957	36.7	2260.3	70.1	14.679	7.033	8.712	-4.6	-34.6
1015	3084	1.51	34.667	2449.	2302.	2402.	2402.	679.2	40.4	2270.9	70.7	7.933	30.9	2276.7	66.4	15.551	7.000	8.675	-8.0	-30.6
1016	3105	1.53	34.667	2440.	2379.	2390.	2390.	609.6	39.0	2267.0	71.7	7.939	30.3	2273.4	67.3	15.374	7.013	8.604	-8.1	-30.1
1017	3124	1.51	34.667	2437.	2397.	2402.	2402.	719.1	42.7	2266.5	67.7	7.912	41.2	2292.3	63.4	10.430	7.704	8.645	-12.2	-42.2
1018	3145	1.51	34.660	2457.	2376.	2402.	2402.	500.5	35.0	2204.5	00.5	7.952	33.6	2260.7	73.7	13.607	7.066	8.770	-0.1	-30.2
1019	3164	1.52	34.660	2444.	2379.	2402.	2402.	600.8	40.9	2260.3	69.0	7.927	39.4	2274.2	65.4	15.910	7.790	8.664	-10.0	-40.9
1020	3185	1.50	34.609	2450.	2377.	2402.	2402.	649.7	30.6	2264.0	73.6	7.951	37.2	2270.6	69.0	15.646	7.023	8.701	-7.4	-37.6
102	3190	1.506	34.500	2445.	2300.	2390.	2390.	629.4	37.4	2255.2	73.4	7.963	36.0	2261.3	70.7	14.643	7.034	8.719	-5.0	-30.0
103	3347	1.405	34.071	2443.	2304.	2402.	2402.	616.7	36.6	2250.9	76.3	7.970	35.3	2257.3	71.3	14.626	7.035	8.725	-7.0	-37.0
104	3495	1.40	34.675	2442.	2306.	2375.	2375.	631.7	30.0	2250.3	73.0	7.949	37.2	2264.9	67.9	15.509	7.007	8.691	-12.3	-43.6
105	3644	1.400	34.670	2445.	2359.	2402.	2402.	500.3	35.0	2244.2	79.0	7.990	33.4	2251.3	74.3	14.329	7.044	8.755	-7.9	-39.7
106																				

CARBON-12 REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
204	1	5 9 73	0050	31 22.8 N	150 2.1 W	5408
204	3	5 9 73	1122	31 22.6 N	150 0.4 W	5384
204	5	5 9 73	2005	31 23.1 N	150 0.0 W	5324

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (U/M/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATM, T=INSITU				CALC PARAMETERS P, T=INSITU				DELTA	DELTA						
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (E-6)	TC02 (M/KG)	GC (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (M/KG)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
501	2	23.56	34.881	2313.	2003.	* 2020	* 362.0	18.7	1772.1	220.2	8.220	* 10.7	1772.1	220.2	5.920	0.220	2.252	174.9	154.5
502	33	23.441	35.234	2332.	1984.	* 2070	* 309.9	5.1	1729.6	243.2	8.203	* 9.1	1729.7	243.1	5.223	0.202	2.532	199.7	179.2
503	57	19.115	34.739	2303.	2000.	* 2012	* 306.0	10.2	1776.9	212.9	8.273	* 10.2	1777.1	212.0	5.335	0.273	2.167	166.9	146.3
504	90	15.014	34.675	2296.	1996.	* 2050	* 266.9	9.0	1777.6	208.6	8.314	* 9.0	1777.9	208.4	4.985	0.311	2.118	162.1	141.4
505	140	13.900	34.449	2263.	2032.	* 2050	* 340.9	13.2	1855.9	162.0	8.217	* 13.2	1856.3	162.5	6.147	0.211	1.641	115.0	94.9
506	173	13.214	34.419	2300.	2041.	* 2070	* 292.5	11.6	1848.2	181.2	8.277	* 11.6	1848.6	180.0	5.362	0.271	1.825	133.9	113.0
507	109	12.770	34.365	2277.	2049.	* 2070	* 332.2	13.4	1874.8	160.0	8.225	* 13.3	1875.2	160.4	6.846	0.219	1.516	113.4	92.4
511	512	5.694	33.950	2294.	2196.	* 2205	* 593.8	29.3	2083.3	83.4	7.905	* 29.1	2084.2	82.6	18.836	7.965	0.523	32.9	11.8
512	573	5.625	33.502	2303.	2239.	* 2253	* 743.6	30.1	2134.1	56.7	7.892	* 37.9	2139.1	66.0	13.321	7.969	0.657	15.7	-6.4
514	623	5.129	34.815	2317.	2272.	* 2392	* 056.2	44.7	2160.7	50.6	7.834	* 44.4	2169.0	57.0	15.505	7.818	0.577	7.1	-15.1
510	930	3.766	34.330	2374.	2371.	* 2396	* 1176.6	64.4	2262.5	44.1	7.706	* 63.9	2264.0	43.1	21.505	7.667	0.434	-10.2	-33.4
519	507	3.635	34.367	2391.	2390.	* 2390	* 1197.3	65.0	2200.4	43.0	7.701	* 65.3	2201.9	42.0	21.859	7.668	0.431	-11.0	-34.3
301	1300	2.903	34.511	2400.	2403.	* 2390	* 1140.7	64.2	2293.4	43.4	7.721	* 63.5	2295.5	44.8	21.500	7.667	0.445	-12.6	-36.7
303	1401	2.793	34.532	2416.	2396.	* 2395	* 1010.2	57.3	2200.0	50.7	7.772	* 56.5	2200.4	49.1	19.334	7.714	0.497	-0.3	-32.0
306	1599	2.465	34.567	2429.	2386.	* 2392	* 037.6	48.0	2270.1	59.9	7.849	* 47.2	2200.0	57.9	16.446	7.704	0.506	-1.4	-26.5
310	1920	2.030	34.606	2430.	2400.	* 2390	* 061.2	50.2	2291.0	50.0	7.937	* 49.2	2295.2	55.7	17.441	7.750	0.565	-6.0	-32.9
312	2077	1.901	34.622	2443.	2400.	* 2390	* 070.9	51.5	2299.0	56.9	7.829	* 50.4	2303.2	54.3	18.040	7.744	0.552	-9.7	-36.2
317	2425	1.706	34.642	2445.	2373.	* 2300	* 667.0	39.4	2263.5	72.1	7.940	* 39.3	2260.1	60.7	14.372	7.842	0.697	0.9	-26.7
320	2844	1.559	34.564	2446.	2374.	* 2300	* 654.5	30.0	2262.2	73.0	7.949	* 37.5	2267.6	60.9	14.606	7.833	0.700	-3.4	-32.5
321	2993	1.521	34.667	2445.	2373.	* 2363	* 653.0	30.0	2261.2	73.0	7.949	* 37.4	2266.9	60.7	14.874	7.820	0.590	-5.4	-35.0
322	3141	1.497	34.671	2444.	2363.	* 2377	* 610.1	36.3	2249.5	77.3	7.976	* 34.9	2255.5	72.6	14.150	7.849	0.730	-3.3	-33.3
102	3591	1.46	34.679	2444.	2356.	* 2377	* 579.2	34.5	2240.0	80.7	7.996	* 32.9	2247.0	75.3	14.056	7.852	0.755	-6.2	-37.0
104	3890	1.455	34.582	2453.	2359.	* 2370	* 557.3	33.2	2241.9	84.0	8.013	* 31.6	2249.6	77.9	13.806	7.857	0.792	-7.5	-40.3
109	4639	1.499	34.507	2442.	2342.	* 2353	* 531.0	31.6	2223.6	96.0	8.030	* 29.0	2232.9	79.4	14.300	7.840	0.507	-16.6	-52.3
112	5099	1.540	34.500	2430.	2332.	* 2353	* 536.5	31.0	2214.7	95.4	8.025	* 29.0	2244.0	77.4	15.101	7.821	0.707	-25.6	-63.1
116	5225	1.553	34.509	2439.	2343.	* 2353	* 547.7	32.5	2225.9	84.7	8.010	* 30.4	2236.1	76.5	15.534	7.809	0.770	-20.0	-56.9

CARBONATE REPORT

SEOSEC PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 206 1 8 9 73 2249 22 9.7 N 153 58.7 W 4632

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	MEASURED PARAMETERS				CALC PARAMETERS P=1 ATM, T=INSITU						CALC PARAMETERS P, T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (ARRG)	
				TALK (ED/KG)	TC02= (M/KG)	GC (E-6)	PC02 (ATTM) (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH			ICP (E-6)
103	10	25.500	35.173	2366.	1906.	* 2003	* 381.4	0.4	1700.5	269.1	0.303	* 8.4	1700.5	265.1	4.901	0.303	2.774	223.0	203.4
104	242	14.043	34.540	2292.	2044.	* 2053	* 331.5	12.5	1856.6	174.0	0.234	* 12.5	1857.2	174.3	5.954	0.225	1.765	127.0	186.0
105	490	6.457	34.010	2290.	2230.	* 2253	* 742.5	37.8	2124.4	60.6	7.895	* 36.0	2125.3	60.0	13.316	7.076	0.670	10.4	-3.5
106	640	4.972	34.107	2342.	2303.	* 2345	* 906.0	47.5	2190.0	56.6	7.014	* 47.2	2199.9	55.0	16.277	7.700	0.560	5.0	-17.3
107	770	4.471	34.320	2301.	2335.	* 2353	* 050.9	45.0	2220.9	60.3	7.040	* 45.4	2230.2	59.3	15.503	7.010	0.597	7.4	-15.2
108	960	3.953	34.400	2306.	2350.	* 2370	* 910.6	40.0	2243.9	56.3	7.011	* 49.3	2245.5	55.2	16.053	7.772	0.937	1.6	-21.5
109	1100	3.304	34.515	2403.	2352.	* 2395	* 001.4	44.0	2244.7	62.7	7.067	* 44.0	2246.0	61.2	15.100	7.019	0.519	5.7	-10.1
110	1552	2.602	34.500	2410.	2367.	* 2300	* 704.0	44.0	2250.9	63.5	7.075	* 43.0	2261.7	61.5	15.399	7.013	0.623	2.6	-22.3
111	1829	2.256	34.606	2420.	2302.	* 2414	* 012.1	46.9	2274.0	61.1	7.061	* 46.0	2277.2	50.0	16.365	7.700	0.596	-2.0	-20.5
115	2605	1.626	34.655	2440.	2372.	* 2373	* 574.3	39.9	2261.0	71.1	7.935	* 30.7	2265.9	67.4	14.790	7.030	0.604	-2.3	-30.5
116	2851	1.537	34.665	2444.	2349.	* 2360	* 551.9	32.0	2232.0	04.2	0.016	* 31.6	2237.7	79.0	12.526	7.902	0.011	7.3	-21.7
117	3097	1.405	34.673	2442.	2365.	* 2375	* 627.6	37.3	2252.4	75.3	7.964	* 35.9	2250.3	70.0	14.400	7.039	0.719	-4.6	-34.5
110	3346	1.460	34.677	2443.	2349.	* 2343	* 554.6	33.0	2232.2	03.0	0.014	* 31.6	2239.0	70.5	13.194	7.000	0.790	0.2	-30.6
119	3570	1.447	34.601	2442.	2340.	* 2340	* 554.2	33.0	2231.2	03.0	0.014	* 31.5	2230.3	70.2	13.470	7.071	0.795	-3.0	-34.6
120	3007	1.433	34.604	2441.	2340.	* 2360	* 526.2	31.4	2221.4	07.3	0.034	* 29.0	2220.0	01.1	13.121	7.002	0.025	-3.1	-35.6
121	4005	1.437	34.605	2440.	2333.	* 2325	* 504.5	30.1	2212.5	00.4	0.051	* 20.5	2220.7	03.0	12.053	7.051	0.052	-3.1	-36.3
122	4202	1.445	34.606	2440.	2331.	* 2339	* 497.5	29.6	2209.9	01.4	0.056	* 20.0	2210.5	04.5	12.917	7.000	0.050	-5.2	-39.1
123	4401	1.443	34.600	2430.	2316.	* 2356	* 477.7	25.5	2193.7	03.0	0.071	* 26.0	2202.7	06.4	12.719	7.000	0.079	-6.1	-40.0

GEOSCOPE PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 212 1 18 9 73 1848 38 0.8 N 159 50.5 W 5731
 212 3 19 9 73 9436 38 0.3 N 159 52.5 W 5791
 212 6 19 9 73 1143 29 58.3 N 159 56.5 W 5838

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=10M.T=INSITU					CALC PARAMETERS P.T=INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARRG) (M/KG)			
		TEMP. (C)	SAL. (E/80)	TALK (E0/KG)	TIT (M/KG)	GC TC02 (M/KG)	PC02 (ATM) (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3- (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3- (M/KG)			PH	ICP (E-6)	
681	7	25.241	35.471	2344.	1973.	2813	388.7	0.6	1782.9	261.5	8.292	8.8	1782.5	261.4	5.111	0.251	2.718	210.2	155.9
683	42	24.649	35.456	2344.	1975.	*	381.4	0.6	1786.6	255.8	8.296	8.6	1786.7	255.6	5.869	0.295	2.699	214.2	193.8
685	57	22.391	35.214	2338.	1969.	1997	279.8	0.5	1787.3	233.3	8.317	8.5	1787.4	233.1	4.845	0.315	2.613	287.5	187.8
686	58	21.637	35.189	2324.	1987.	*	299.3	9.3	1741.1	236.7	8.298	9.3	1741.2	236.5	5.153	0.288	2.448	198.7	178.2
687	86	19.428	35.167	2325.	2016.	*	311.4	10.2	1788.6	217.2	8.271	10.2	1788.8	217.8	5.355	0.268	2.237	171.8	158.4
688	181	18.938	35.149	2322.	2007.	*	294.9	9.8	1776.6	228.8	8.289	9.8	1776.8	228.4	5.186	0.285	2.271	174.2	153.6
689	121	17.715	34.974	2387.	2010.	2038	295.5	10.4	1791.8	287.8	8.279	10.3	1792.1	287.5	5.316	0.274	2.129	161.2	148.5
611	161	16.891	34.768	2295.	2006.	*	385.8	18.4	1794.1	281.6	8.298	18.4	1794.5	281.2	5.194	0.295	2.858	154.5	133.6
616	258	13.266	34.429	2283.	2038.	*	311.4	12.3	1853.8	171.9	8.251	12.3	1854.4	171.3	5.724	0.242	1.729	123.9	182.8
617	276	12.617	34.349	2288.	2041.	*	318.0	12.6	1868.8	167.6	8.258	12.5	1861.5	167.8	5.752	0.248	1.681	119.4	98.2
619	362	10.857	34.236	2276.	2007.	*	381.2	16.3	1934.8	133.9	8.168	16.2	1935.6	133.2	6.996	0.155	1.357	86.9	63.4
621	432	9.278	34.133	2288.	2128.	*	427.8	19.3	1982.5	118.2	8.121	19.2	1983.4	117.4	7.958	0.185	1.174	68.4	46.8
622	478	8.323	34.676	2283.	2137.	*	458.5	21.8	2066.1	189.8	8.097	21.8	2067.1	189.8	8.327	0.288	1.889	59.7	37.9
623	528	7.185	34.828	2289.	2184.	*	573.4	27.8	2089.2	87.8	8.888	27.6	2078.2	86.2	10.483	0.988	0.868	36.4	14.5
381	569	6.688	34.818	2298.	2192.	2209	559.5	27.7	2076.7	87.6	8.889	27.5	2077.7	88.8	18.388	0.987	0.865	35.6	14.6
382	621	5.683	34.818	2386.	2243.	2285	738.5	38.5	2138.2	66.3	7.888	38.2	2139.2	63.5	13.687	0.884	0.653	14.9	-7.3
383	688	4.882	34.848	2318.	2289.	*	964.8	58.9	2185.9	52.1	7.784	58.6	2187.8	51.4	17.525	0.756	0.513	8.1	-22.3
384	768	4.345	34.155	2335.	2331.	2347	1137.8	61.8	2225.8	45.8	7.718	60.6	2228.2	44.2	28.687	0.586	0.443	-7.7	-38.4
385	867	3.973	34.239	2355.	2339.	*	1244.1	67.6	2249.8	41.8	7.681	67.2	2251.1	40.7	22.647	0.645	0.488	-12.1	-35.8
386	964	3.666	34.323	2370.	2365.	2385	1151.8	63.3	2257.1	44.8	7.714	62.8	2258.6	43.6	21.188	0.674	0.439	-9.9	-33.2
387	964	3.668	34.338	2371.	2374.	2389	1227.5	67.4	2264.5	42.1	7.688	66.9	2259.9	41.1	22.512	0.648	0.414	-12.4	-35.7
388	1878	3.388	34.428	2387.	2388.	*	1826.6	57.8	2261.3	49.8	7.763	56.4	2263.1	48.5	19.152	0.718	0.489	-6.2	-29.8
389	1243	3.855	34.485	2482.	2365.	2395	914.1	51.3	2272.4	53.3	7.812	58.7	2264.5	53.8	17.343	0.761	0.544	-2.2	-26.2
318	1392	2.784	34.529	2489.	2375.	*	538.3	52.7	2272.8	54.3	7.884	52.8	2274.3	52.6	17.988	0.747	0.532	-4.8	-29.2
311	1948	2.527	34.558	2421.	2353.	2392	744.8	42.6	2254.3	68.1	7.898	41.8	2257.1	64.1	14.649	0.834	0.649	5.3	-19.6
312	1588	2.345	34.575	2423.	2376.	*	885.8	46.4	2258.2	61.4	7.863	45.6	2271.2	55.2	16.845	0.795	0.688	-1.8	-26.3
315	1838	2.165	34.595	2429.	2354.	*	648.2	37.6	2242.3	74.1	7.952	38.8	2245.8	71.5	13.248	0.878	0.725	9.3	-15.9
316	1982	2.832	34.688	2431.	2358.	2395	653.1	38.2	2246.7	73.2	7.947	37.3	2258.4	78.3	13.563	0.868	0.713	7.2	-19.8
317	1982	2.832	34.687	2428.	2372.	2481	744.5	43.4	2283.3	65.3	7.895	42.4	2256.9	62.7	15.328	0.815	0.636	-8.4	-26.6
319	2275	1.884	34.629	2434.	2377.	2392	735.3	43.2	2267.9	65.5	7.988	42.1	2272.8	62.9	15.378	0.887	0.638	-3.2	-38.4
320	2423	1.728	34.639	2435.	2362.	*	658.8	39.3	2258.4	73.3	7.958	37.2	2255.8	69.8	14.858	0.832	0.789	2.1	-25.5
321	2573	1.675	34.647	2437.	2375.	2382	786.1	41.7	2265.8	68.3	7.518	40.5	2285.8	64.7	15.423	0.812	0.657	-4.6	-32.7
322	2726	1.611	34.652	2442.	2355.	*	585.6	34.7	2248.1	88.2	7.992	33.5	2245.5	76.8	13.889	0.883	0.772	5.8	-23.6
323	2886	1.581	34.659	2437.	2354.	2378	688.6	35.6	2248.3	78.1	7.981	34.3	2245.9	73.8	13.639	0.865	0.749	8.9	-28.2
324	2987	1.561	34.661	2436.	2368.	*	631.8	37.5	2247.9	74.7	7.961	36.1	2253.6	78.3	14.452	0.848	0.714	-3.7	-33.2
181	3882	1.559	34.668	2441.	2349.	*	563.4	33.4	2232.9	82.7	8.888	32.1	2238.9	78.8	12.962	0.887	0.793	3.8	-25.7
182	3882	1.558	34.659	2439.	2347.	2388	562.8	33.4	2231.8	82.6	8.888	32.1	2236.9	78.8	12.962	0.887	0.792	3.8	-25.8
183	3235	1.52	34.668	2437.	2353.	*	595.5	33.4	2239.8	78.6	7.984	34.8	2245.3	73.8	13.987	0.854	0.758	-3.2	-33.6
184	3468	1.495	34.672	2448.	2341.	2383	534.6	31.8	2223.8	86.2	9.828	38.4	2229.9	80.7	12.981	0.889	0.828	8.8	-38.4
185	3699	1.482	34.675	2441.	2337.	*	516.3	38.7	2217.4	88.9	8.842	29.2	2224.5	82.9	12.732	0.894	0.842	8.8	-32.8
186	3531	1.472	34.676	2437.	2321.	2344	473.3	28.2	2197.8	95.1	8.876	26.7	2285.9	88.4	12.833	0.928	0.899	2.5	-38.4
187	4161	1.479	34.681	2437.	2339.	*	537.2	32.8	2221.4	85.8	8.825	38.3	2229.7	79.8	13.848	0.855	0.883	-18.8	-43.8
188	4391	1.49	34.682	2435.	2335.	*	529.2	31.5	2216.9	86.8	8.831	29.7	2225.7	75.6	13.949	0.955	0.889	-12.8	-47.4
189	4628	1.498	34.684	2437.	2338.	2329	584.2	38.8	2285.8	98.2	9.851	28.2	2219.1	82.7	13.682	0.866	0.841	-13.8	-48.6
118	4849	1.515	34.685	2434.	2323.	*	498.2	29.1	2281.5	92.4	8.861	27.3	2211.4	84.3	13.545	0.868	0.857	-14.9	-51.4
112	5384	1.557	34.687	2438.	2328.	2349	474.5	28.1	2198.8	95.8	8.875	26.2	2287.8	86.8	13.683	0.864	0.875	-28.5	-58.9
115	5526	1.58	34.688	2432.	2328.	*	588.8	38.1	2285.3	89.8	8.847	28.8	2217.4	88.6	14.515	0.826	0.828	-29.7	-69.8

CARBONATE REPORT

GEOSecs	PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
	213	2	22 9 73	1132	31 9.3 N	158 27.5 W	5681
	213	4	22 9 73	2211	31 1.3 N	158 27.2 W	5671
	213	6	23 9 73	3516	31 4.6 N	158 25.2 W	5671

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM, T=INSITU					CALC PARAMETERS P, T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (ARRG)			
				TALK (EQ/KG)	TC02= (M/KG)	GC (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)			AH	PH	ICP (E-6)
601	21	28.793	35.515	2351.	1976.	* 1993	322.9	8.7	1782.4	264.8	8.279	* 8.7	1782.5	264.7	5.259	8.278	2.756	219.5	199.2
602	37	26.768	35.532	2349.	1971.	* 2000	318.3	8.6	1695.5	268.8	8.293	* 8.6	1695.6	266.7	5.224	8.282	2.778	221.4	201.1
603	47	28.177	35.528	2347.	1962.	* 2002	368.5	8.3	1682.6	271.1	8.381	* 8.3	1682.7	271.8	5.815	8.388	2.822	225.6	205.2
605	58	19.474	34.868	2388.	1968.	* 2000	252.9	8.7	1721.9	236.4	8.329	* 8.6	1722.1	237.2	4.714	8.327	2.424	191.3	178.7
606	78	18.511	34.868	2383.	1988.	* 2000	271.2	3.2	1745.4	225.4	8.316	* 9.2	1745.6	225.2	4.863	8.313	2.298	179.2	158.5
608	98	16.889	34.738	2298.	1989.	* 2000	266.6	9.5	1754.4	215.1	8.317	* 9.5	1754.6	214.9	4.868	8.313	2.188	168.7	147.9
609	117	15.884	34.726	2381.	1998.	* 2038	262.9	9.6	1774.4	212.8	8.321	* 9.6	1774.7	211.8	4.824	8.317	2.155	163.4	144.6
611	208	13.982	34.523	2256.	2023.	* 2045	291.5	11.4	1828.8	183.6	9.277	* 11.3	1828.5	183.1	5.378	8.269	1.853	136.8	115.8
612	258	13.862	34.458	2288.	2047.	* 2000	315.9	12.6	1665.1	169.2	8.246	* 12.6	1665.7	168.7	5.796	8.327	1.784	121.2	188.1
615	317	12.195	34.388	2283.	2864.	* 2113	341.3	14.8	1655.8	155.8	8.214	* 14.8	1655.7	154.3	6.258	8.263	1.556	86.4	85.1
617	429	9.894	34.193	2282.	2088.	* 2125	356.7	15.8	1933.5	138.7	8.191	* 15.7	1934.5	137.8	6.672	8.176	1.382	89.8	67.4
618	479	8.899	34.131	2285.	2187.	* 2000	376.9	17.2	1981.1	128.7	8.168	* 17.1	1982.1	127.8	7.871	8.158	1.279	78.5	56.7
619	517	6.296	34.894	2285.	2138.	* 2162	424.8	19.8	1995.1	115.8	8.128	* 19.7	1996.2	114.1	7.925	8.181	1.148	64.5	42.6
621	638	6.111	34.835	2383.	2268.	* 2000	588.1	29.6	2093.5	62.9	7.988	* 29.4	2094.7	61.9	18.888	7.963	8.817	31.2	3.8
622	639	6.117	34.827	2384.	2229.	* 2249	695.9	35.1	2122.8	72.8	7.921	* 34.8	2123.1	71.1	12.718	7.896	8.789	28.4	-1.9
621	648	6.185	34.828	2386.	2216.	* 2256	628.8	31.3	2195.3	79.4	7.967	* 31.8	2186.5	78.5	11.434	7.942	8.783	27.8	5.5
622	718	5.152	34.648	2317.	2253.	* 2000	738.3	38.4	2147.7	58.9	7.896	* 38.1	2149.8	56.8	13.578	7.867	8.658	14.5	-8.8
624	758	4.733	34.882	2329.	2273.	* 2000	777.6	41.1	2188.3	63.5	7.874	* 48.8	2169.7	62.5	14.333	7.844	6.625	18.8	-11.9
484	879	4.163	34.178	2357.	2327.	* 2357	952.6	51.4	2222.2	53.3	7.793	* 51.8	2223.7	52.3	17.491	7.757	8.524	-8.5	-23.5
486	1039	3.625	34.328	2374.	2378.	* 2489	1168.1	63.8	2281.8	44.3	7.712	* 63.3	2283.5	43.3	21.455	7.668	8.433	-11.8	-34.4
488	1289	3.224	34.438	2392.	2388.	* 2399	1152.9	64.3	2278.9	44.8	7.715	* 63.7	2280.8	43.5	21.648	7.665	8.439	-12.2	-36.1
411	1458	2.734	34.519	2489.	2383.	* 2000	957.6	54.4	2275.9	52.8	7.792	* 53.6	2278.3	51.8	18.528	7.732	8.516	-7.8	-31.6
418	1459	2.732	34.519	2487.	2369.	* 2412	878.5	49.5	2282.2	57.4	7.831	* 48.7	2264.7	55.6	18.928	7.771	8.562	-2.4	-27.8
412	1595	2.452	34.547	2418.	2387.	* 2488	916.5	52.5	2279.6	54.8	7.811	* 51.7	2282.4	52.9	17.988	7.745	8.536	-6.4	-31.4
415	1748	2.297	34.572	2425.	2372.	* 2485	768.2	44.3	2263.7	64.8	7.883	* 43.5	2266.8	61.7	15.415	7.812	6.625	6.9	-24.6
416	1896	2.189	34.591	2429.	2392.	* 2000	866.2	58.3	2284.3	57.4	7.834	* 49.4	2287.6	55.1	17.543	7.756	8.558	-7.2	-33.1
417	2847	1.988	34.687	2434.	2359.	* 2398	645.6	37.7	2247.1	74.2	7.954	* 36.8	2251.8	71.2	13.448	7.871	8.723	7.5	-18.9
419	2345	1.783	34.632	2438.	2378.	* 2398	719.9	42.4	2268.3	67.4	7.989	* 41.2	2272.6	64.2	15.347	7.814	8.652	-2.7	-38.8
428	2497	1.714	34.635	2439.	2387.	* 2000	655.8	38.7	2255.4	72.9	7.947	* 37.5	2268.2	69.3	14.255	7.846	8.784	3.8	-27.8
421	2647	1.546	34.647	2448.	2351.	* 2383	578.1	34.2	2235.6	81.2	7.997	* 33.8	2248.8	77.1	12.838	7.891	8.784	7.8	-21.3
422	2847	1.666	34.646	2438.	2348.	* 2391	572.9	33.9	2232.5	81.6	8.881	* 32.7	2237.7	77.5	12.748	7.855	8.788	7.4	-28.9
281	2984	1.598	34.658	2438.	2372.	* 2000	682.7	48.5	2261.5	78.1	7.938	* 39.1	2266.9	56.8	15.417	7.812	8.678	-7.1	-36.3
424	2959	1.582	34.657	2439.	2364.	* 2379	638.3	37.8	2251.9	74.3	7.957	* 36.5	2257.6	69.9	14.588	7.836	8.711	-4.2	-33.7
282	3182	1.552	34.668	2438.	2358.	* 2383	613.7	36.4	2242.9	78.7	7.972	* 35.8	2248.9	72.1	14.212	7.847	8.732	-3.3	-33.2
284	3521	1.496	34.672	2436.	2333.	* 2374	518.1	38.8	2214.8	88.1	8.848	* 29.4	2221.1	82.5	12.689	7.899	8.838	1.9	-29.5
285	3749	1.485	34.677	2436.	2342.	* 2000	552.6	32.9	2225.6	83.6	8.814	* 31.3	2233.8	77.7	13.685	7.864	8.798	-5.8	-38.8
286	3999	1.479	34.679	2433.	2346.	* 2371	588.4	34.5	2231.5	88.8	7.994	* 32.8	2239.3	73.9	14.698	7.833	8.751	-12.9	-46.1
288	4499	1.588	34.683	2435.	2325.	* 2358	493.4	29.3	2283.9	91.8	8.859	* 27.6	2213.8	84.4	13.198	7.888	8.858	-9.6	-44.6
289	4748	1.518	34.684	2436.	2346.	* 2000	589.3	33.8	2238.7	81.5	8.882	* 31.9	2239.9	74.2	15.443	7.811	8.755	-23.4	-59.5
218	4997	1.548	34.685	2435.	2317.	* 2354	467.6	27.8	2193.2	98.1	8.881	* 25.9	2283.5	87.6	13.128	7.882	8.858	-14.8	-51.1
212	5397	1.569	34.688	2432.	2332.	* 2392	538.2	31.4	2214.8	86.6	8.838	* 29.3	2224.7	78.8	15.348	7.814	8.793	-38.2	-68.9
219	5591	1.572	34.698	2426.	2329.	* 2342	539.7	32.8	2212.8	84.8	8.822	* 29.8	2223.1	76.1	15.933	7.798	8.774	-35.4	-75.8

CARBONS REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
214	1	25 9 73	1440	32 1.5 N	176 59.9 W	5384
214	4	26 9 73	0946	32 1.5 N	177 4.5 W	5364
214	6	26 9 73	1615	32 4.1 N	177 7.6 W	5889

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TALK (EO/KG)	TIT		CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (ARRG)				
					TC02* (E-6)	GC (E-6)	PC02 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)			PH	ICP (E-6)		
681	8	25.76	34.746	2296.	1937.	*	338.5	9.4	1787.8	233.7	9.255	*	9.4	1787.8	233.7	5.559	8.255	2.442	194.4	174.1
682	16	25.77	34.752	2382.	1942.	*	389.2	8.8	1679.5	253.9	8.287	*	8.6	1679.5	253.8	5.167	8.287	2.586	288.3	188.2
684	32	24.24	34.736	2384.	1934.	*	389.8	8.8	1698.4	246.7	8.288	*	8.8	1698.5	246.7	5.159	8.287	2.513	281.2	188.9
686	42	21.27	34.736	2298.	1938.	*	278.8	8.5	1697.9	243.6	8.323	*	8.5	1698.0	243.5	4.772	8.321	2.488	197.8	177.3
687	47	20.24	34.654	2285.	1936.	*	278.3	9.8	1716.9	238.1	8.388	*	9.8	1717.8	238.8	4.937	8.387	2.337	184.3	163.7
688	53	19.483	34.711	2318.	1958.	*	247.5	8.2	1784.1	245.7	8.351	*	8.2	1784.3	245.6	4.479	8.349	2.499	199.8	179.2
610	88	16.229	34.684	2297.	2088.	*	276.4	8.8	1679.5	287.1	8.383	*	8.8	1783.2	286.9	5.813	8.388	2.183	168.7	148.8
511	115	15.456	34.651	2291.	2028.	*	382.7	11.2	1819.1	189.7	8.268	*	11.2	1819.4	189.4	5.448	8.264	1.924	143.8	122.2
619	282	13.588	34.687	2299.	2023.	*	273.8	10.7	1828.2	192.1	8.381	*	10.7	1828.7	191.7	5.877	8.294	1.939	144.6	123.6
616	296	12.738	34.433	2291.	2032.	*	284.5	11.5	1839.9	188.6	9.284	*	11.4	1848.5	188.8	5.318	8.275	1.817	132.6	111.4
619	398	9.933	34.244	2294.	2092.	*	344.6	15.2	1932.9	143.9	8.286	*	15.1	1933.8	143.1	6.429	8.192	1.436	94.4	72.9
628	434	9.111	34.172	2297.	2187.	*	357.5	18.2	1934.4	136.3	8.191	*	16.1	1955.4	133.5	6.687	8.175	1.357	86.5	64.9
621	472	8.541	34.134	2299.	2188.	*	343.8	15.9	1932.1	138.8	8.285	*	15.8	1953.2	137.8	6.492	8.188	1.371	87.7	66.8
481	539	8.839	34.899	2298.	2158.	*	465.9	22.8	2821.6	186.5	8.884	*	21.8	2822.7	185.6	8.626	8.864	1.855	55.7	33.8
623	549	7.823	34.837	2387.	2154.	*	414.5	28.2	2819.8	114.8	8.129	*	28.1	2828.9	113.8	7.788	8.189	1.128	63.8	41.1
624	689	6.248	34.838	2382.	2223.	*	688.1	34.5	2117.5	72.9	7.925	*	34.3	2118.6	72.1	12.547	7.981	8.728	21.6	-8.5
484	781	4.798	34.181	2328.	2278.	*	884.3	42.5	2171.8	61.7	7.858	*	42.1	2173.1	68.8	14.888	7.838	8.688	9.8	-13.6
485	883	4.875	34.282	2338.	2329.	*	957.5	51.9	2224.2	52.9	7.791	*	51.4	2225.7	51.8	17.596	7.753	8.519	-1.1	-24.8
488	891	4.852	34.282	2353.	2342.	*	1183.8	59.8	2233.9	46.3	7.731	*	59.4	2237.3	45.3	28.222	7.694	8.454	-7.6	-38.6
487	979	3.584	34.275	2373.	2344.	*	946.7	52.2	2238.7	53.2	7.795	*	51.7	2248.3	51.9	17.564	7.753	8.521	-1.9	-25.1
488	1088	3.358	34.346	2382.	2378.	*	1081.9	68.1	2262.7	47.2	7.741	*	59.5	2264.5	46.8	28.139	7.696	8.463	-8.6	-32.1
489	1181	3.186	34.395	2387.	2376.	*	1086.9	68.8	2268.2	47.8	7.739	*	68.1	2278.1	45.7	28.437	7.698	8.461	-9.7	-33.6
410	1181	3.186	34.396	2391.	2394.	*	1216.2	68.8	2283.4	42.6	7.693	*	67.4	2283.3	41.4	22.738	7.643	8.417	-14.1	-37.9
411	1282	2.991	34.448	2487.	2377.	*	934.9	52.6	2278.1	54.2	7.883	*	52.8	2272.3	52.6	17.757	7.751	8.531	-3.8	-27.9
415	1479	2.627	34.499	2414.	2488.	*	1031.1	68.8	2291.5	48.5	7.754	*	59.2	2293.9	46.9	28.288	7.693	8.474	-11.3	-36.8
417	1788	2.288	34.552	2433.	2363.	*	576.7	39.1	2252.1	71.9	7.936	*	38.3	2255.3	69.4	13.563	7.868	8.783	9.1	-16.2
419	2082	1.958	34.595	2435.	2372.	*	786.1	41.3	2262.1	68.6	7.917	*	48.3	2265.8	65.9	14.573	7.838	8.688	2.6	-23.7
421	2481	1.718	34.631	2439.	2357.	*	688.6	35.9	2243.4	77.7	7.977	*	34.8	2248.1	74.1	13.166	7.881	8.752	6.6	-28.9
423	2799	1.583	34.653	2438.	2363.	*	646.9	38.3	2231.4	73.3	7.951	*	37.1	2258.7	69.3	14.518	7.838	8.784	-2.6	-31.5
182	3889	1.588	34.664	2437.	2348.	*	573.7	34.1	2232.8	81.1	7.999	*	32.8	2238.9	78.4	13.323	7.875	8.776	1.1	-28.7
185	3487	1.468	34.674	2437.	2382.	*	633.4	37.8	2249.9	74.3	7.958	*	36.2	2256.5	69.2	15.239	7.817	8.784	-18.9	-42.2
186	3738	1.461	34.678	2436.	2381.	*	634.7	37.8	2249.8	74.2	7.958	*	36.1	2256.1	68.8	15.593	7.867	8.699	-14.5	-46.7
189	4233	1.475	34.682	2438.	2339.	*	548.3	32.2	2221.8	85.8	8.823	*	38.4	2238.2	78.4	14.815	7.853	8.797	-11.7	-45.8
118	4483	1.486	34.635	2432.	2330.	*	528.6	31.8	2211.5	87.5	8.837	*	29.2	2228.5	98.3	13.872	7.853	8.817	-13.4	-48.4
111	4788	1.495	34.687	2432.	2338.	*	543.9	32.3	2219.2	84.5	8.828	*	38.4	2229.6	77.8	14.863	7.828	8.783	-21.2	-57.4
118	5195	1.521	34.687	2423.	2334.	*	589.5	33.3	2219.5	88.7	8.888	*	31.7	2229.5	72.8	16.194	7.791	8.748	-32.8	-69.9
124	5286	1.531	34.689	2429.	2348.	*	571.9	34.8	2225.2	88.9	7.999	*	31.8	2235.4	72.8	16.356	7.786	8.741	-33.5	-71.8

GEOSIDS FACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SGT DEPTH
 215 1 28 9 73 1329 37 28.6 N 177 19.4 W 3538
 215 3 28 9 73 2291 37 25.3 N 177 21.4 W 5523
 215 5 29 3 73 9539 37 22.2 N 177 28.8 W 5489

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-19 (UP/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/100)	TALK (KG)	MEASURED PARAMETERS				CALC PARAMETERS P=18TH,T=INSITU				CALC PARAMETERS P,T=INSITU				DELTA CO3 (CALC) (M/KG)	DELTA CO3 (ARAG) (M/KG)				
					TIT (M/KG)	GC (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	PH			ICP (M/KG)	(E-6)	(E-6)	(E-6)
582	33	28.857	34.329	2278.	1945.	=	1986	=	275.8	8.9	1788.6	227.9	9.311	=	8.9	1788.7	227.4	4.988	9.318	2.288	161.7	161.2
584	68	18.153	34.675	2291.	1992.	=	2839	=	271.2	9.8	1774.1	288.1	8.389	=	9.8	1774.2	287.9	4.935	8.387	2.114	161.9	141.2
586	99	13.355	34.837	2298.	2002.	=	2856	=	287.8	18.7	1797.7	193.6	8.284	=	18.7	1797.9	193.4	5.234	8.281	1.964	147.2	125.5
587	118	14.524	34.613	2283.	2814.	=		=	291.3	11.1	1819.3	187.8	8.278	=	11.1	1819.6	187.3	9.328	8.274	1.981	148.9	128.1
588	138	14.848	34.528	2294.	2827.	=		=	383.3	11.7	1833.4	179.8	9.263	=	11.7	1833.8	179.9	9.528	8.258	1.817	133.8	112.1
589	188	13.196	34.464	2278.	2839.	=		=	318.8	12.7	1858.6	167.7	8.241	=	12.6	1859.8	167.3	9.821	8.233	1.691	128.4	99.4
511	298	11.422	34.338	2291.	2864.	=	2879	=	334.1	14.1	1898.6	153.4	8.228	=	14.8	1897.2	152.8	6.168	8.218	1.538	185.8	83.8
513	482	9.638	34.196	2278.	2188.	=		=	387.8	17.3	1954.8	129.7	8.159	=	17.2	1954.8	128.8	7.172	8.144	1.283	79.3	57.7
514	471	7.712	34.183	2293.	2148.	=	2183	=	446.2	21.3	2817.4	189.3	8.188	=	21.1	2818.3	188.9	8.266	8.883	1.885	59.2	37.4
519	544	8.431	34.828	2388.	2142.	=		=	398.2	19.4	2886.8	118.3	9.149	=	19.3	2887.2	119.5	7.434	8.129	1.153	63.6	43.6
918	818	9.891	33.994	2388.	2182.	=		=	499.8	23.4	2862.8	93.8	8.851	=	23.1	2864.8	92.8	9.388	8.828	8.925	42.3	28.1
517	719	4.789	34.838	2315.	2387.	=		=	778.8	41.1	2156.1	62.7	7.871	=	48.6	2157.4	61.6	14.373	7.642	8.617	18.4	-12.2
918	819	4.298	34.118	2329.	2387.	=	2387	=	1887.9	54.2	2283.2	43.7	7.766	=	53.6	2284.9	48.8	18.532	7.732	8.488	-3.5	-26.3
919	938	3.771	34.214	2335.	2347.	=		=	1388.2	71.5	2236.7	38.8	7.656	=	71.1	2238.1	37.9	24.154	7.617	8.388	-19.5	-38.6
528	1881	3.396	34.382	2378.	2368.	=	2399	=	1894.6	68.7	2233.8	48.2	7.734	=	68.2	2234.7	45.1	28.417	7.638	8.454	-9.3	-32.8
521	1183	3.878	34.388	2384.	2388.	=		=	972.8	54.6	2253.9	51.5	7.783	=	54.8	2253.9	58.1	18.417	7.735	8.585	-5.4	-29.3
522	1383	2.828	34.412	2391.	2348.	=	2456	=	831.6	47.1	2241.8	59.8	7.548	=	46.9	2244.1	57.4	16.845	7.795	8.579	8.8	-23.3
523	1488	2.644	34.446	2399.	2368.	=	2411	=	882.3	58.3	2253.8	53.9	7.823	=	49.8	2256.2	54.2	17.153	7.766	8.947	-3.3	-27.8
516	1514	2.351	34.473	2399.	2489.	=	2431	=	1238.2	72.8	2296.9	48.6	7.677	=	71.2	2298.6	39.1	24.392	7.613	8.395	-19.9	-44.3
524	1682	2.445	34.491	2483.	2482.	=		=	1152.6	66.2	2291.8	44.8	7.713	=	63.3	2294.4	42.3	22.583	7.646	8.428	-17.8	-42.1
317	1858	2.343	34.511	2412.	2363.	=		=	788.1	49.4	2255.6	62.8	7.871	=	44.6	2258.5	59.9	19.728	7.883	8.585	8.8	-25.3
318	1793	2.187	34.538	2417.	2379.	=	2429	=	634.6	49.7	2277.9	57.6	7.837	=	48.7	2274.9	53.3	17.251	7.783	8.568	-5.9	-31.5
319	1918	2.889	34.562	2433.	2398.	=		=	888.5	91.2	2298.1	96.7	7.828	=	98.2	2293.4	54.4	17.838	7.749	8.551	-8.1	-34.1
320	1918	2.889	34.563	2428.	2392.	=		=	872.1	58.7	2284.2	57.8	7.931	=	49.7	2287.6	94.7	17.783	7.752	8.554	-7.8	-33.8
322	2181	1.899	34.597	2435.	2389.	=		=	688.8	48.4	2288.6	78.8	7.927	=	39.3	2262.7	67.8	14.683	7.939	8.679	1.8	-23.8
323	2289	1.838	34.618	2446.	2378.	=	2418	=	648.8	37.6	2257.5	74.9	7.958	=	36.6	2261.9	71.6	13.638	7.865	8.726	5.2	-22.1
324	2593	1.787	34.629	2435.	2383.	=		=	781.9	45.8	2274.3	63.8	7.885	=	43.7	2278.9	68.4	16.555	7.781	8.613	-8.7	-36.8
183	2883	1.598	34.649	2427.	2374.	=	2377	=	798.1	44.9	2283.5	64.8	7.998	=	43.8	2278.6	68.2	16.918	7.772	8.611	-12.6	-41.8
184	3139	1.522	34.661	2425.	2343.	=		=	599.7	39.6	2238.1	77.3	7.988	=	34.3	2236.1	72.6	14.815	7.853	8.738	-3.2	-33.2
185	3384	1.488	34.668	2419.	2324.	=	2338	=	942.9	32.3	2288.1	83.6	8.618	=	58.9	2214.8	78.3	13.899	7.883	8.796	-8.9	-31.4
187	3881	1.457	34.576	2425.	2328.	=	2353	=	987.8	38.2	2288.9	38.9	8.846	=	28.7	2288.7	92.8	12.837	7.892	8.848	-2.6	-35.3
188	3881	1.457	34.579	2424.	2344.	=		=	887.4	36.2	2231.5	75.3	7.974	=	34.5	2238.9	78.6	15.231	7.817	8.718	-14.6	-47.4
111	4758	1.514	34.689	2428.	2341.	=		=	579.3	34.4	2226.7	79.8	7.994	=	32.4	2235.9	72.6	15.788	7.882	8.739	-25.3	-61.9
112	5882	1.558	34.683	2426.	2321.	=	2352	=	989.9	38.2	2281.8	39.8	8.845	=	28.3	2211.9	98.8	14.367	7.943	8.922	-21.8	-99.2
117	9398	1.599	34.684	2428.	2325.	=		=	517.7	38.7	2286.4	87.9	8.839	=	28.6	2217.2	79.3	15.825	7.823	8.886	-28.9	-67.6

WPC REPORT
 WEDSECS PACIFIC STATION CAST DATE S LATITUDE LONGITUDE BOT DEPTH
 219 2 8 18 73 1511 53 6.6 N 177 17.5 W 3725
 219 4 9 18 73 0036 53 7.4 N 177 15.1 W 3723

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P=1ATH.T=INSITU					CALC PARAMETERS P.T=INSITU					DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/100)	TALK (EQ/KG)	TIT (M/KG)	GC TC02* (M/KG)	TC02* (M/KG)	PC02 (ATH) (M/KG)	H2CO3 (M/KG)	HCO3- (E-6) (M/KG)	CO3= (E-6) (M/KG)	PH	H2CO3 (M/KG)	HCO3- (E-6) (M/KG)	CO3= (E-6) (M/KG)	PH	PH	ICP (E-6)	CO3= (M/KG)	CO3= (ARRG) (M/KG)
401	5	7.187	33.869	2263.	2088.	* 2831	* 324.8	15.9	1932.9	131.3	8.228	* 15.9	1932.9	131.3	8.825	8.228	1.272	89.3	64.7	
406	43	7.257	33.867	2265.	2115.	* 2837	* 483.3	19.6	1983.5	111.9	8.137	* 19.6	1983.6	111.8	7.319	8.136	1.864	65.7	44.9	
408	51	7.225	33.867	2268.	2874.	* 2833	* 319.1	15.6	1925.3	133.1	8.226	* 15.5	1925.5	133.8	5.972	8.224	1.289	86.8	66.8	
411	89	4.139	33.354	2278.	2142.	* 2168	* 398.3	21.6	2817.2	183.2	8.132	* 21.6	2817.4	183.8	7.444	8.128	1.887	56.3	35.4	
413	125	3.761	33.487	2291.	2189.	*	* 586.4	27.9	2876.3	84.9	8.837	* 27.8	2876.5	84.7	9.281	8.832	8.831	37.6	16.6	
414	168	3.544	33.524	2298.	2225.	* 2281	* 638.4	35.8	2119.6	78.5	7.958	* 34.9	2119.8	78.3	11.386	7.944	8.691	23.8	1.8	
415	189	3.612	33.592	2297.	2228.	*	* 652.6	36.1	2123.4	68.5	7.936	* 36.8	2123.7	68.3	11.792	7.928	8.672	28.8	-8.4	
416	219	3.615	33.651	2296.	2246.	* 2224	* 761.3	42.1	2144.8	59.9	7.873	* 42.8	2144.4	59.7	13.678	7.864	8.589	12.8	-9.3	
418	299	3.551	33.613	2315.	2281.	* 2312	* 878.8	48.5	2178.7	53.8	7.818	* 48.4	2179.2	53.4	15.655	7.885	8.529	5.1	-16.4	
419	349	3.372	33.886	2323.	2331.	* 2317	* 1244.1	68.8	2222.7	39.6	7.675	* 68.6	2223.2	39.2	21.888	7.668	8.398	-9.5	-31.1	
421	468	3.448	34.827	2348.	2355.	* 2368	* 1319.6	73.2	2243.8	38.8	7.652	* 73.8	2244.5	37.5	23.388	7.633	8.374	-12.1	-34.8	
422	538	3.398	34.183	2352.	2363.	* 2344	* 1292.2	71.2	2252.5	39.3	7.666	* 71.8	2253.2	38.8	22.727	7.643	8.388	-11.3	-33.4	
261	642	3.278	34.177	2361.	2365.	* 2376	* 1211.8	67.6	2255.9	41.5	7.698	* 67.3	2256.8	40.9	21.721	7.663	8.418	-18.1	-32.5	
424	726	3.187	34.237	2372.	2383.	* 2376	* 1283.1	71.8	2271.5	39.7	7.668	* 71.4	2272.6	39.8	23.868	7.637	8.392	-12.7	-35.3	
283	943	2.898	34.337	2392.	2399.	* 2381	* 1239.8	78.1	2287.6	41.3	7.684	* 69.6	2289.1	48.4	22.696	7.644	8.486	-13.2	-36.3	
284	1189	2.612	34.413	2408.	2482.	* 2411	* 1114.8	63.7	2292.7	45.7	7.729	* 63.8	2294.6	44.4	28.924	7.679	8.448	-11.2	-35.1	
286	1677	2.897	34.536	2425.	2393.	* 2483	* 898.2	52.2	2285.4	55.3	7.818	* 51.4	2288.3	53.3	17.814	7.749	8.540	-6.8	-32.1	
288	2257	1.755	34.613	2444.	2389.	* 2406	* 748.9	44.1	2279.6	65.3	7.894	* 43.8	2283.8	62.2	15.815	7.881	8.631	-4.8	-31.2	
289	2583	1.669	34.635	2446.	2385.	* 2331	* 714.0	42.2	2274.8	68.8	7.913	* 48.9	2279.6	64.4	15.543	7.888	8.654	-5.8	-33.1	
218	2884	1.689	34.658	2452.	2396.	* 2398	* 742.1	43.9	2286.2	65.9	7.898	* 42.5	2291.5	62.8	16.566	7.781	8.529	-18.8	-48.8	
211	3182	1.586	34.658	2452.	2392.	* 2395	* 719.7	42.7	2281.7	67.7	7.911	* 41.1	2287.6	53.3	16.552	7.781	8.643	-13.8	-43.2	
212	3488	1.586	34.665	2457.	2488.	* 2362	* 738.1	43.7	2289.8	66.4	7.981	* 42.1	2296.2	61.7	17.486	7.759	8.627	-18.2	-49.5	
218	3681	1.587	34.667	2459.	2374.	* 2382	* 599.1	35.5	2258.9	79.6	7.986	* 33.9	2266.8	74.1	14.413	7.841	8.753	-7.4	-39.1	
224	3811	1.622	34.669	2459.	2359.	* 2270	* 663.9	65.7	2276.9	72.4	7.941	* 38.3	2283.9	67.1	15.197	7.791	8.582	-15.8	-47.9	

CARBONATE REPORT

GEOSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
221	1	14 18 73	0538	45 13.8 N	169 35.5 E	6038
221	4	14 18 73	2312	45 17.5 N	169 22.9 E	5648
221	5	14 18 73	0235	45 17.4 N	169 23.3 E	5645

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM.T=INSITU					CALC PARAMETERS P.T=INSITU					DELTA CO3- (M/KG)	DELTA CO3- (ARRG)		
			SAL. (E-6)	TALK (E-6)	TC02 (E-6)	GC (E-6)	TC02 (E-6)	PCO2 (ATM)	HC03- (M/KG)	CO3- (M/KG)	PH	HC03- (M/KG)	CO3- (M/KG)	AM	PH			ICP (E-6)	
481	5	18.72	32.968	2246.	2817.	* 1997	* 293.2	12.3	1843.7	161.8	9.279	* 12.3	1843.7	161.0	5.262	8.279	1.536	115.2	94.7
482	52	7.89	33.431	2263.	2882.	* 2877	* 327.8	16.0	1934.9	131.0	8.214	* 16.0	1933.0	130.9	6.131	8.212	1.283	84.6	63.8
483	182	5.87	33.712	2273.	2111.	*	* 353.8	18.1	1973.6	119.3	8.181	* 18.1	1973.0	119.1	6.648	8.177	1.177	72.3	51.3
484	151	4.98	33.732	2287.	2157.	*	* 435.4	22.3	2834.1	188.0	8.108	* 22.9	2834.4	99.7	8.849	8.094	8.986	52.6	31.5
485	288	4.48	33.782	2299.	2221.	* 2297	* 632.2	33.8	2114.2	73.8	7.952	* 33.7	2114.6	72.7	11.369	7.944	8.728	23.1	3.3
486	299	3.67	33.835	2314.	2271.	*	* 816.5	45.1	2168.5	57.4	7.846	* 44.9	2169.8	57.1	14.647	7.834	8.566	8.7	-12.8
487	397	3.63	33.958	2335.	2299.	* 2299	* 875.3	48.3	2195.7	55.8	7.822	* 48.1	2196.4	54.5	15.633	7.806	8.543	5.5	-16.3
488	495	3.68	34.879	2345.	2389.	*	* 898.8	48.6	2285.2	55.2	7.821	* 48.3	2286.8	54.6	15.825	7.801	8.546	4.8	-17.2
489	594	3.46	34.178	2358.	2349.	* 2341	* 1098.8	68.9	2242.5	45.7	7.731	* 68.6	2243.4	45.0	19.662	7.786	8.451	-5.6	-27.8
410	592	3.31	34.241	2374.	2358.	*	* 1848.2	57.9	2251.7	48.4	7.756	* 57.6	2252.8	47.6	18.731	7.727	8.478	-3.8	-26.3
411	798	3.16	34.382	2385.	2381.	* 2372	* 1145.1	64.1	2272.3	44.6	7.717	* 63.7	2273.5	43.8	28.786	7.684	8.448	-8.4	-31.2
412	898	3.08	34.344	2398.	2388.	*	* 1158.1	65.2	2278.8	44.8	7.712	* 64.7	2280.2	43.1	21.136	7.675	8.433	-10.8	-33.1
413	988	2.82	34.387	2398.	2387.	*	* 1675.3	68.9	2278.9	47.1	7.743	* 68.4	2280.5	45.1	19.858	7.782	8.464	-7.8	-31.2
418	1488	2.27	34.585	2421.	2486.	* 2393	* 1831.4	59.6	2297.4	49.8	7.762	* 58.8	2299.9	47.3	19.933	7.788	8.479	-18.9	-35.7
417	1973	1.97	34.586	2431.	2488.	*	* 984.6	52.9	2292.8	55.1	7.816	* 51.8	2295.4	52.7	18.448	7.734	8.534	-18.3	-36.5
418	2488	1.73	34.627	2435.	2388.	* 2373	* 792.8	46.7	2279.6	61.7	7.869	* 45.5	2284.8	58.5	17.853	7.768	8.593	-9.7	-37.5
419	2968	1.59	34.654	2438.	2373.	*	* 687.9	48.8	2262.6	69.6	7.927	* 39.4	2268.2	65.5	15.611	7.887	8.665	-8.2	-37.6
428	3552	1.58	34.673	2436.	2343.	*	* 556.7	33.1	2226.9	83.8	8.811	* 31.6	2233.9	77.5	13.526	7.869	8.788	-3.4	-34.9
182	3698	1.483	34.674	2443.	2353.	*	* 578.8	34.8	2237.4	81.7	8.882	* 32.4	2244.6	76.8	13.991	7.854	8.773	-6.7	-38.7
183	3888	1.478	34.678	2435.	2352.	* 2284	* 598.3	35.6	2238.3	78.1	7.982	* 33.9	2245.8	72.3	14.954	7.825	8.735	-13.1	-45.8
184	4889	1.479	34.688	2441.	2368.	*	* 688.9	36.2	2246.6	77.2	7.976	* 34.4	2254.4	71.1	15.454	7.811	8.723	-16.9	-50.4
185	4298	1.483	34.681	2434.	2338.	* 2319	* 543.9	32.4	2221.2	84.5	8.828	* 38.6	2229.6	77.8	14.187	7.848	8.791	-13.1	-47.4
186	4489	1.493	34.682	2437.	2335.	*	* 522.2	31.1	2215.3	87.6	9.837	* 29.3	2225.3	88.4	13.889	7.857	8.818	-13.4	-48.4
187	4689	1.587	34.682	2433.	2348.	* 2337	* 555.7	33.8	2224.1	82.9	8.811	* 31.1	2233.2	75.6	15.828	7.823	8.769	-21.1	-57.8
188	4887	1.533	34.685	2448.	2341.	*	* 555.3	31.8	2223.8	86.2	8.828	* 29.8	2232.7	78.4	14.731	7.832	8.798	-21.4	-58.8
189	5077	1.543	34.637	2439.	2335.	* 2354	* 527.5	31.3	2219.5	37.2	8.833	* 29.3	2229.7	79.0	14.382	7.838	8.804	-24.0	-51.4
118	5284	1.565	34.686	2434.	2337.	*	* 542.2	32.2	2219.8	85.1	8.822	* 38.8	2238.2	76.7	15.581	7.818	8.788	-29.5	-67.8
112	5688	1.614	34.687	2434.	2335.	* 2262	* 535.2	31.7	2217.3	86.1	8.827	* 29.5	2228.5	77.1	15.877	7.799	8.784	-35.9	-75.9
117	5889	1.648	34.688	2438.	2334.	* 2281	* 518.2	38.6	2214.5	88.7	8.841	* 28.4	2226.4	79.2	15.669	7.885	8.886	-37.5	-78.5
124	6848	1.662	34.688	2441.	2341.	* 2322	* 535.8	31.6	2222.6	86.8	8.828	* 29.3	2234.6	77.2	16.355	7.786	8.785	-42.3	-83.9

111

CARBONATE REPORT

SECS	PACIFIC	STATION	CAST	DATE	LATITUDE	LONGITUDE	SOT DEPTH	
		222	3	16 10 73	48 10.0 N	160 30.0 E	5379	
		222	6	17 10 73	3615	48 10.0 N	160 30.0 E	5368
		222	8	17 10 73	1730	48 10.0 N	160 30.0 E	5394
		222	9	17 10 73	2229	48 10.0 N	160 30.0 E	5647

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-19 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	MEASURED PARAMETERS			CALC PARAMETERS P=10TM, T=(NSITU)					CALC PARAMETERS P.T=INSITU			DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)			
				TALK (ED/KG) (E-6)	TC02* (M/KG) (E-6)	GC* (M/KG) (E-6)	PC02 (M/KG) (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3* (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3* (M/KG) (E-6)			PH	PH	(CP) (E-6)
881	2	15.87	33.927	2268.	1953.	1999	236.5	8.7	1725.4	218.9	8.357	8.7	1725.4	218.9	4.408	0.357	2.170	173.2	152.7
882	51	13.14	33.320	2283.	2024.	*	283.1	11.3	1031.4	181.3	8.288	11.3	1831.6	181.1	5.176	8.286	1.801	135.1	114.4
883	101	8.72	34.866	2288.	2181.	2186	394.5	16.3	1998.5	134.2	8.191	16.3	1998.7	134.0	6.490	0.188	1.338	97.3	66.4
885	388	5.21	33.967	2294.	2199.	2221	571.0	29.7	2007.0	81.5	7.995	29.6	2008.3	81.0	10.397	7.383	0.805	32.8	11.4
886	399	4.44	33.342	2317.	2242.	*	655.7	35.1	2134.9	72.0	7.940	34.9	2135.7	71.4	11.980	7.924	0.718	22.4	8.6
813	497	4.89	34.035	2338.	2292.	2382	923.3	44.7	2180.1	59.3	7.849	44.4	2188.9	58.7	14.815	7.929	0.585	0.9	-13.1
814	537	3.75	34.138	2348.	2334.	*	1062.0	59.2	2220.6	47.2	7.745	57.9	2229.5	46.5	19.848	7.728	0.466	-4.1	-25.3
816	596	3.53	34.211	2368.	2341.	2384	1817.3	56.2	2235.6	49.1	7.763	55.9	2236.0	48.4	18.418	7.735	0.485	-3.0	-25.6
817	755	3.34	34.272	2367.	2349.	*	1823.1	56.9	2243.1	49.0	7.761	56.5	2244.4	48.1	18.698	7.728	0.483	-4.1	-25.9
818	994	3.117	34.339	2388.	2368.	2366	1871.8	68.0	2268.0	47.2	7.743	59.6	2262.3	46.2	19.667	7.706	0.465	-6.9	-29.9
819	992	2.89	34.372	2385.	2384.	*	1161.9	65.7	2274.7	43.6	7.799	65.1	2276.3	42.6	21.489	7.668	0.429	-11.3	-34.6
928	1091	2.7	34.418	2483.	2397.	2393	1116.4	63.5	2287.9	45.6	7.728	63.0	2289.6	44.4	20.775	7.682	0.448	-18.4	-34.8
821	1108	2.58	34.439	2482.	2387.	*	1034.9	59.2	2279.2	48.6	7.759	58.5	2281.2	47.3	19.535	7.709	0.477	-0.3	-32.2
822	1287	2.46	34.471	2418.	2405.	2399	1119.8	64.2	2295.4	45.4	7.727	63.5	2297.4	44.0	21.229	7.673	0.445	-12.5	-36.7
823	1386	2.36	34.491	2488.	2398.	*	1068.3	61.5	2281.6	46.9	7.744	60.8	2283.9	45.3	20.687	7.686	0.458	-12.1	-36.5
829	1484	2.29	34.519	2426.	2397.	2396	926.4	53.5	2299.3	54.1	7.887	52.7	2291.0	52.6	17.965	7.746	0.533	-5.7	-38.4
826	1584	2.21	34.533	2416.	2389.	*	934.6	54.1	2281.6	53.3	7.881	53.3	2284.3	51.4	18.385	7.736	0.528	-7.8	-32.9
827	1683	2.13	34.548	2421.	2384.	*	863.2	50.1	2276.6	57.2	7.834	49.3	2279.6	55.1	17.181	7.765	0.558	-5.0	-38.4
828	1732	2.07	34.561	2418.	2389.	*	916.4	53.4	2281.6	54.1	7.889	52.4	2284.7	52.1	18.485	7.733	0.528	-9.0	-34.6
881	1812	2.05	34.567	2427.	2408.	2482	933.7	54.4	2292.1	53.5	7.882	53.4	2295.2	51.4	18.738	7.727	0.521	-18.0	-35.0
829	1882	2.81	34.574	2421.	2377.	2387	814.2	47.5	2269.4	60.1	7.857	46.6	2272.7	57.7	16.585	7.788	0.585	-4.4	-30.3
882	1989	1.99	34.589	2429.	2383.	*	882.3	46.9	2275.0	61.1	7.864	45.9	2278.6	58.5	16.477	7.783	0.593	-4.7	-38.9
884	2346	1.75	34.625	2438.	2398.	*	788.0	46.9	2281.3	62.2	7.872	45.3	2285.6	59.1	16.754	7.776	0.688	-7.7	-35.1
889	2523	1.69	34.676	2438.	2367.	2364	698.0	41.2	2257.3	68.5	7.928	48.0	2262.8	65.0	15.222	7.818	0.668	-3.7	-31.7
886	2781	1.61	34.647	2438.	2372.	*	723.7	42.9	2262.8	66.3	7.985	41.6	2267.0	62.7	16.039	7.795	0.636	-0.1	-36.6
614	2981	1.58	34.697	2432.	2364.	2358	670.1	39.7	2253.5	78.0	7.936	38.4	2258.9	66.8	15.152	7.828	0.678	-6.8	-35.2
617	3197	1.51	34.664	2429.	2353.	2346	628.6	37.4	2241.1	74.5	7.961	35.9	2247.2	69.9	14.719	7.832	0.718	-6.6	-36.9
316	3588	1.489	34.672	2434.	2358.	2368	629.8	37.5	2245.9	74.6	7.961	35.9	2252.6	69.5	15.143	7.828	0.787	-18.7	-42.8
619	3693	1.48	34.673	2438.	2342.	2338	575.1	34.2	2227.4	80.4	7.997	32.7	2234.6	74.8	14.173	7.949	0.768	-8.8	-40.8
317	3998	1.473	34.688	2434.	2336.	2343	539.9	31.9	2218.6	85.5	8.026	30.3	2226.5	79.2	13.619	7.866	0.805	-7.6	-48.8
521	4198	1.469	34.578	2427.	2324.	2341	514.6	38.6	2205.5	87.9	8.841	29.8	2213.9	81.1	13.383	7.873	0.825	-8.4	-42.2
622	4368	1.47	34.684	2434.	2345.	*	572.8	34.8	2238.8	81.0	8.888	32.2	2238.9	74.3	14.993	7.824	0.785	-17.7	-52.3
623	4547	1.49	34.684	2428.	2342.	*	583.1	34.7	2228.8	79.3	7.991	32.8	2236.7	72.5	15.563	7.888	0.737	-22.2	-57.4
629	4726	1.49	34.638	2436.	2343.	*	557.8	33.1	2226.8	93.1	8.811	31.2	2236.1	75.7	15.189	7.821	0.778	-21.6	-57.6
626	4985	1.51	34.687	2439.	2345.	2318	569.8	33.8	2229.7	81.5	8.882	31.8	2239.2	74.8	15.671	7.885	0.792	-26.1	-62.9
627	5004	1.528	34.686	2429.	2323.	*	585.9	38.8	2203.4	89.5	8.848	28.1	2213.7	91.2	14.287	7.845	0.826	-21.7	-59.2
628	5254	1.544	34.688	2431.	2333.	*	537.0	31.9	2215.6	85.5	8.825	29.8	2226.0	77.2	15.355	7.814	0.785	-28.7	-66.9
629	5443	1.56	34.688	2429.	2341.	2318	576.9	34.2	2226.4	80.4	7.996	32.0	2236.9	72.1	16.719	7.777	0.733	-36.0	-79.8
321	5458	1.567	34.691	2438.	2329.	2336	525.6	31.2	2218.8	87.8	8.833	29.8	2221.7	78.3	15.323	7.815	0.796	-38.3	-69.9
323	5528	1.576	34.691	3446.	2338.	2371	585.8	29.9	2217.1	91.0	8.852	27.8	2228.2	81.9	14.738	7.832	0.833	-28.3	-67.6

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
223	2	28 10 73	1528	34 58.4 N	151 58.5 E	6129
223	5	28 10 73	2318	39 8.8 N	151 45.9 E	6128
223	8	21 10 73	1624	34 58.4 N	151 48.1 E	6112

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-19 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/80)	TALK (EO/KG)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATM.T=INSITU				CALC PARAMETERS P.T=INSITU				DELTA CO3= (M/KG)	DELTA CO3= (M/KG)					
					TIT (E-6)	GC (E-6)	TC02 (E-6)	TC02 (E-6)	PC02 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)			PH	PH	ICP (E-6)	ICP (E-6)	
881	1	22.472	34.523	2290.	1926.	*	*	*	*	268.2	7.9	1663.1	255.8	8.338	*	7.9	1663.1	255.8	4.995	8.338	2.581	289.6	189.2
885	19	22.473	34.529	2289.	1929.	*	*	*	*	269.8	8.1	1668.6	252.3	8.331	*	8.8	1668.7	252.3	4.678	8.331	2.554	286.8	186.4
888	58	21.798	34.543	2286.	1929.	*	*	*	*	258.2	8.1	1671.2	249.7	8.336	*	8.8	1671.3	249.6	4.636	8.334	2.528	283.9	183.4
889	69	20.881	34.774	2389.	1979.	*	*	*	*	299.6	9.4	1748.6	229.8	8.291	*	9.4	1748.7	229.9	5.141	8.289	2.333	183.1	162.9
612	84	19.939	34.787	2385.	1988.	*	*	*	*	286.3	9.3	1742.9	227.8	8.388	*	9.3	1743.1	227.6	5.843	8.297	2.321	181.7	161.8
919	98	19.416	34.783	2318.	1982.	*	*	*	*	277.4	9.1	1743.1	229.7	8.311	*	9.1	1743.4	229.5	4.925	8.388	2.348	183.4	162.7
817	124	18.579	34.783	2383.	2002.	*	*	*	*	282.9	18.2	1788.4	211.4	8.277	*	18.2	1788.7	211.1	5.348	8.272	2.152	164.8	144.8
318	169	17.734	34.772	2336.	2012.	*	*	*	*	268.9	9.3	1775.7	226.9	8.322	*	9.3	1776.2	226.5	4.826	8.316	2.389	179.9	159.1
919	288	17.214	34.761	2389.	1999.	*	*	*	*	278.6	9.4	1775.5	213.7	8.383	*	9.8	1775.8	213.2	5.853	8.296	2.173	166.3	145.4
581	388	19.791	34.702	2381.	2843.	*	*	*	*	331.6	12.2	1849.8	181.9	8.237	*	12.1	1849.9	181.8	5.976	8.292	1.941	132.8	111.9
582	468	14.239	34.599	2381.	2874.	*	*	*	*	364.7	14.8	1898.5	161.5	8.198	*	13.9	1899.6	168.5	6.588	9.182	1.627	111.7	58.1
583	558	11.871	34.423	2381.	2188.	*	*	*	*	388.8	15.7	1948.8	144.3	8.176	*	15.6	1941.2	143.2	6.974	8.157	1.445	93.6	71.8
589	598	8.273	34.223	2314.	2195.	*	*	*	*	554.1	23.9	2873.6	95.5	8.821	*	29.6	2875.8	94.4	18.112	7.995	8.947	43.5	21.2
588	749	6.611	34.182	2318.	2213.	*	*	*	*	971.7	28.3	2897.2	87.5	8.883	*	28.8	2898.6	86.3	18.681	7.975	8.863	34.8	12.3
588	868	4.549	34.268	2329.	2271.	*	*	*	*	759.5	48.5	2166.2	64.4	7.883	*	48.1	2167.7	63.3	14.189	7.848	8.632	18.6	-12.3
589	928	4.593	34.169	2347.	2383.	*	*	*	*	868.2	45.7	2198.6	58.7	7.835	*	45.3	2288.1	57.5	15.933	7.798	8.577	4.4	-18.7
918	988	4.212	34.282	2396.	2322.	*	*	*	*	923.3	49.8	2217.4	54.8	7.886	*	49.3	2219.1	53.7	17.152	7.766	8.538	-8.1	-23.3
511	1886	3.736	34.255	2372.	2347.	*	*	*	*	983.8	53.9	2241.4	51.7	7.798	*	53.3	2243.2	58.4	18.365	7.736	8.586	-4.2	-27.7
912	1165	3.443	34.317	2381.	2366.	*	*	*	*	1858.1	58.6	2299.2	48.2	7.758	*	58.8	2261.1	46.9	19.899	7.781	8.472	-8.6	-32.4
514	1294	3.189	34.375	2391.	2379.	*	*	*	*	1844.8	58.4	2267.9	48.7	7.756	*	57.7	2278.8	47.3	19.849	7.782	8.477	-9.1	-33.3
517	1629	2.534	34.484	2418.	2483.	*	*	*	*	1848.1	99.5	2294.9	48.9	7.759	*	58.7	2297.2	47.1	28.362	7.691	8.476	-12.5	-37.6
519	1987	2.147	34.568	2428.	2393.	*	*	*	*	888.3	51.1	2285.3	56.6	7.827	*	58.1	2288.8	54.1	17.967	7.746	8.549	-9.8	-35.2
528	2168	1.986	34.589	2432.	2378.	*	*	*	*	758.4	44.2	2269.2	64.6	7.889	*	43.1	2273.2	61.7	15.846	7.888	8.625	-3.5	-38.3
521	2387	1.347	34.614	2437.	2388.	*	*	*	*	784.8	46.8	2279.5	62.5	7.875	*	44.8	2283.8	59.4	16.787	7.777	8.683	-7.9	-35.4
281	2938	1.639	34.652	2441.	2368.	*	*	*	*	698.1	38.9	2256.1	73.4	7.998	*	37.1	2261.7	59.2	14.727	7.932	8.783	-4.1	-33.4
524	2999	1.626	34.655	2438.	2394.	*	*	*	*	597.9	35.4	2248.8	78.6	7.983	*	34.1	2245.9	74.2	13.786	7.863	8.753	8.1	-29.5
283	3338	1.951	34.664	2439.	2351.	*	*	*	*	579.3	34.4	2236.8	88.6	7.998	*	32.9	2242.5	75.5	13.731	7.862	8.768	-2.6	-33.3
284	3928	1.529	34.678	2437.	2351.	*	*	*	*	586.9	34.9	2236.5	79.6	7.998	*	33.3	2243.4	74.3	14.178	7.848	8.755	-6.3	-37.7
285	3727	1.587	34.673	2437.	2354.	*	*	*	*	599.1	35.5	2248.3	78.1	7.982	*	34.8	2247.9	72.5	14.738	7.832	8.737	-18.7	-42.9
287	4123	1.493	34.681	2437.	2343.	*	*	*	*	553.2	32.9	2226.5	83.6	3.814	*	31.2	2234.6	77.2	14.176	7.848	8.784	-11.4	-45.8
218	4371	1.521	34.587	2434.	2352.	*	*	*	*	321.9	31.8	2213.4	97.6	3.837	*	29.1	2223.2	79.8	14.337	7.342	8.811	-19.3	-55.4
212	5371	1.558	34.589	2437.	2329.	*	*	*	*	488.4	29.8	2203.1	92.9	3.864	*	27.8	2214.8	94.8	14.142	7.958	8.984	-23.7	-62.4
214	5631	1.573	34.591	2429.	2321.	*	*	*	*	583.2	29.8	2201.1	98.1	9.858	*	27.7	2212.4	88.9	14.954	7.825	8.322	-31.3	-71.1
224	5888	1.619	34.691	2427.	2316.	*	*	*	*	489.8	29.8	2194.9	92.1	8.861	*	26.8	2287.2	92.1	15.197	7.918	8.935	-38.2	-98.1

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 224 1 24 10 73 0611 34 15.5 N 141 58.0 E 9737
 224 3 24 10 73 2119 34 13.4 N 141 57.2 E 9130
 224 5 25 10 73 0446 34 15.3 N 142 0.5 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS										CALC PARAMETERS P=1ATM.T=INSITU*				CALC PARAMETERS P.T=INSITU								
SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/100)	TALK (EO/KG)	TALK (M/KG)	TIT TC02 (E-6)	GC TC02 (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (M/KG)	DELTA	DELTA		
																			CO3= (E-6)	CO3= (E-6)	CO3= (E-6)	CO3= (E-6)
501	1	23.846	34.585	2295.	1919.	*	1939	*	271.5	8.0	1654.2	256.8	8.326	*	8.0	1654.2	256.8	4.723	8.326	2.598	211.5	191.1
502	14	23.847	34.582	2279.	1923.	*	1923	*	282.6	8.3	1664.8	249.9	8.311	*	8.3	1664.8	249.9	4.891	8.311	2.527	204.5	184.1
503	46	23.842	34.588	2276.	1938.	*	1948	*	295.2	9.7	1678.2	243.2	9.296	*	8.6	1678.3	243.1	5.881	8.294	2.459	197.5	177.8
505	345	15.442	34.729	2295.	1999.	*	2026	*	288.1	10.1	1782.5	206.4	8.298	*	10.0	1793.4	203.6	5.171	8.286	2.893	197.7	136.5
511	445	15.858	34.635	2251.	2037.	*	2067	*	324.6	12.2	1846.3	178.6	8.242	*	12.1	1847.3	177.6	5.942	8.226	1.883	129.8	107.5
514	572	12.858	34.427	2293.	2182.	*	2111	*	483.5	16.6	1947.3	138.0	8.153	*	16.5	1948.6	136.9	7.374	8.132	1.382	87.2	65.4
517	768	7.713	34.223	2317.	2215.	*	2215	*	612.5	29.2	2099.6	86.3	7.988	*	28.9	2101.8	85.1	11.197	7.951	0.354	33.6	11.1
519	891	5.965	34.173	2325.	2262.	*	2262	*	771.4	39.8	2156.2	66.8	7.881	*	38.7	2157.6	65.7	14.198	7.848	0.658	13.3	-3.5
520	962	5.292	34.183	2337.	2258.	*	2295	*	667.3	34.5	2149.8	74.4	7.939	*	34.2	2158.6	73.2	12.488	7.904	0.733	20.3	-2.7
101	939	4.954	34.197	2344.	2294.	*	2311	*	827.9	43.6	2189.1	61.3	7.851	*	43.1	2198.7	60.1	13.361	7.814	0.602	6.9	-16.2
522	1003	4.331	34.211	2354.	2298.	*	2331	*	777.6	41.7	2192.3	64.8	7.876	*	41.3	2194.0	62.7	14.598	7.836	0.629	8.9	-14.4
103	1139	3.727	34.385	2371.	2358.	*	2363	*	1082.9	59.4	2251.3	47.4	7.748	*	58.8	2253.1	46.1	20.269	7.693	0.464	-8.9	-32.6
104	1238	3.358	34.356	2384.	2364.	*	2364	*	1016.2	55.4	2257.6	58.0	7.767	*	55.7	2259.6	48.6	19.231	7.716	0.498	-7.3	-31.3
524	1301	3.252	34.388	2388.	2362.	*	2373	*	966.2	53.9	2255.8	52.4	7.788	*	53.2	2258.0	50.9	18.438	7.734	0.513	-5.6	-29.8
106	1437	2.962	34.442	2408.	2353.	*	2392	*	813.7	45.9	2246.2	68.9	7.959	*	45.1	2248.8	59.1	15.834	7.888	0.597	1.3	-23.2
107	1536	2.669	34.467	2409.	2393.	*	2393	*	1033.5	58.9	2285.0	49.1	7.761	*	58.1	2287.6	47.4	28.894	7.697	0.479	-11.3	-36.2
108	1638	2.486	34.497	2413.	2355.	*	2408	*	1812.5	58.1	2287.8	45.9	7.769	*	57.2	2285.8	48.1	19.912	7.701	0.486	-11.6	-36.8
110	1837	2.248	34.541	2429.	2355.	*	2358	*	919.2	53.2	2291.2	54.6	7.818	*	52.2	2294.3	52.3	18.431	7.734	0.538	-9.3	-35.8
111	1933	2.133	34.561	2425.	2389.	*	2389	*	872.4	58.6	2281.5	56.9	7.838	*	49.6	2284.8	54.5	17.741	7.791	0.532	-9.8	-34.1
112	2031	2.078	34.574	2424.	2388.	*	2406	*	878.2	58.6	2288.4	56.9	7.831	*	49.6	2284.8	54.4	17.889	7.747	0.551	-9.1	-35.5
116	2735	1.685	34.545	2431.	2368.	*	2368	*	598.9	41.3	2258.1	68.6	7.919	*	40.0	2263.2	64.8	15.543	7.888	0.658	-6.3	-34.9
118	3201	1.559	34.667	2434.	2346.	*	2346	*	577.3	34.2	2231.3	88.4	7.997	*	32.8	2237.7	75.4	13.651	7.865	0.767	-2.1	-32.6
121	4375	1.493	34.665	2431.	2325.	*	2378	*	556.1	38.1	2285.3	89.6	9.848	*	29.4	2214.1	92.5	13.379	7.974	0.839	-9.6	-44.2
122	5025	1.527	34.598	2429.	2337.	*	2337	*	559.5	33.2	2221.4	82.4	9.888	*	31.2	2231.2	74.6	15.631	7.986	0.799	-27.4	-64.6
123	5074	1.574	34.578	2429.	2335.	*	2332	*	514.2	32.5	2225.0	98.5	9.842	*	29.4	2216.9	79.7	15.833	7.823	0.810	-29.8	-56.3
124	5937	1.556	34.694	2431.	2329.	*	2339	*	491.3	29.1	2199.6	92.3	9.860	*	26.9	2218.7	82.4	15.094	7.921	0.838	-36.2	-77.5

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
225	2	6 11 73	0633	32 37.0 N	161 55.0 E	5942
225	5	6 11 73	2184	32 39.5 N	161 49.5 E	5958
225	6	6 11 73	2383	32 39.5 N	161 48.0 E	5955
225	8	7 11 73	0432	32 40.0 N	161 47.0 E	5939

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

MEASURED PARAMETERS							CALC PARAMETERS P=1 ATM, T=INSITU							CALC PARAMETERS P, T=INSITU			DELTA	DELTA											
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EQ/KG)	TIT (E-6)	GC TC02 (M/KG)	TC02 (M/KG)	TC02* (E-6)	TC02 (E-6)	TC02 (E-6)	TC03 (E-6)	TC03 (E-6)	TC03 (E-6)	TC03 (E-6)	PH	M2CO3 (E-6)	MCO3 (E-6)	CO3 (E-6)	AH (E-9)	PH	ICP (E-6)	ICP (E-6)	ICP (E-6)	ICP (E-6)	ICP (E-6)	ICP (E-6)	ICP (E-6)		
802	41	23.24	34.570	2283.	1910.	1960	*	*	266.0	7.9	1634.4	255.7	8.331	*	7.9	1634.5	255.6	4.685	8.329	2.598	218.0	189.5							
803	62	28.99	34.674	2297.	1960.	*	*	*	279.9	8.8	1714.9	236.2	8.310	*	9.8	1715.1	236.1	4.923	8.308	2.399	190.3	169.7							
804	81	19.75	34.744	2296.	1977.	*	*	2001	277.0	9.3	1744.9	222.8	8.308	*	9.3	1745.1	222.6	4.954	8.305	2.267	175.6	155.9							
805	121	17.27	34.742	2295.	1991.	*	*	*	279.1	9.8	1769.2	212.1	8.301	*	9.8	1769.5	211.8	5.042	8.297	2.157	165.4	144.7							
806	160	16.58	34.698	2293.	1999.	*	*	2021	283.1	10.2	1793.6	205.2	8.294	*	10.1	1794.0	204.8	5.142	8.289	2.083	158.2	137.3							
807	200	16.24	34.694	2283.	2010.	*	*	*	308.0	11.1	1807.8	191.1	8.262	*	11.1	1808.3	190.6	5.557	8.255	1.939	143.7	122.8							
808	249	15.69	34.672	2296.	2017.	*	*	2042	294.8	10.8	1811.1	195.0	8.279	*	10.8	1811.7	194.5	5.371	8.270	1.977	147.2	126.2							
809	299	14.97	34.618	2294.	2029.	*	*	*	306.2	11.5	1831.8	185.7	8.263	*	11.5	1832.5	185.0	5.592	8.252	1.978	137.4	116.2							
814	348	13.97	34.544	2285.	2032.	*	*	2079	309.0	12.0	1842.0	177.2	8.256	*	11.9	1843.6	176.5	5.987	8.244	1.797	128.4	107.1							
825	397	13.13	34.486	2286.	2047.	*	*	*	321.1	12.0	1866.2	168.0	8.240	*	12.7	1867.1	167.2	5.947	8.226	1.696	118.8	97.3							
826	471	11.515	34.354	2292.	2075.	*	*	2091	338.7	14.2	1907.0	153.7	8.217	*	14.1	1908.1	152.8	6.311	8.200	1.538	103.7	82.1							
827	545	9.04	34.233	2300.	2092.	*	*	*	332.9	14.7	1929.6	147.6	8.220	*	14.6	1930.9	146.5	6.385	8.200	1.470	96.8	74.9							
802	595	7.95	34.098	2280.	2149.	*	*	*	454.1	21.5	2015.5	100.8	8.094	*	21.3	2016.7	107.0	8.484	8.071	1.070	56.8	34.7							
829	643	7.37	34.057	2294.	2135.	*	*	*	480.5	19.3	1990.5	117.2	8.141	*	19.1	1999.9	116.0	7.632	8.117	1.158	65.4	43.2							
803	696	5.66	34.005	2305.	2225.	*	*	2249	639.2	32.7	2115.9	76.4	7.954	*	32.5	2117.2	75.4	11.843	7.927	0.751	24.2	1.8							
804	793	4.71	34.003	2323.	2289.	*	*	*	925.2	49.0	2185.8	54.2	7.802	*	48.6	2187.1	53.2	16.996	7.770	0.532	1.2	-21.5							
805	993	4.12	34.168	2340.	2316.	*	*	2347	996.6	53.6	2211.8	50.7	7.774	*	53.1	2213.2	49.7	18.315	7.737	0.497	-3.3	-26.3							
806	991	3.73	34.248	2361.	2355.	*	*	*	1139.9	62.5	2247.7	44.8	7.717	*	62.0	2249.3	43.7	21.074	7.676	0.439	-10.1	-33.3							
801	1001	3.46	34.305	2375.	2371.	*	*	2386	1153.5	63.9	2262.7	44.4	7.713	*	63.3	2264.4	43.3	21.455	7.668	0.435	-11.3	-34.9							
807	1180	3.15	34.370	2384.	2365.	*	*	2394	1016.4	56.9	2250.4	49.7	7.766	*	56.3	2250.3	48.4	19.201	7.717	0.407	-7.2	-31.8							
809	1476	2.530	34.476	2410.	2386.	*	*	2416	966.2	55.3	2270.6	52.1	7.780	*	54.5	2281.1	50.3	18.752	7.727	0.509	-7.9	-32.6							
814	1619	2.34	34.512	2419.	2386.	*	*	*	896.3	51.7	2278.7	55.6	7.819	*	50.8	2281.5	53.6	17.669	7.753	0.543	-5.9	-31.0							
829	1770	2.19	34.546	2414.	2385.	*	*	2420	919.2	53.3	2277.7	53.9	7.807	*	52.4	2290.0	51.8	18.440	7.734	0.524	-3.2	-34.8							
826	1920	2.06	34.572	2422.	2390.	*	*	*	896.5	52.2	2282.5	55.3	7.818	*	51.2	2285.9	52.9	18.233	7.739	0.537	-3.5	-35.5							
827	2060	1.921	34.595	2429.	2369.	*	*	2423	971.3	59.3	2249.5	71.2	7.937	*	58.3	2253.4	58.3	14.019	7.853	0.693	4.3	-22.2							
820	2216	1.93	34.613	2430.	2350.	*	*	*	917.0	56.2	2237.3	75.5	7.970	*	55.2	2241.5	73.2	13.137	7.892	0.743	7.7	-19.2							
629	2365	1.754	34.625	2421.	2394.	*	*	2385	852.7	50.2	2276.5	57.2	7.837	*	49.0	2280.7	54.3	10.212	7.740	0.551	-12.7	-40.2							
631	2666	1.62	34.646	2434.	2362.	*	*	2380	651.9	38.6	2250.6	72.8	7.948	*	37.4	2255.7	69.0	14.440	7.840	0.700	-1.4	-29.8							
632	2813	1.513	34.551	2434.	2376.	*	*	*	725.0	42.9	2266.7	66.4	7.983	*	41.6	2271.9	62.6	16.209	7.790	0.636	-9.4	-39.3							
633	2964	1.56	34.657	2430.	2345.	*	*	2371	589.2	35.8	2231.1	70.9	7.980	*	33.7	2236.9	74.4	13.532	7.869	0.756	0.7	-29.7							
201	3155	1.54	34.662	2425.	2343.	*	*	2371	584.4	34.7	2220.9	79.4	7.991	*	33.3	2235.0	74.6	13.670	7.864	0.750	-1.4	-31.5							
634	3215	1.513	34.666	2433.	2345.	*	*	2351	576.7	34.3	2230.2	80.5	7.997	*	32.9	2236.5	75.6	13.567	7.868	0.760	-1.1	-31.5							
203	3546	1.50	34.671	2425.	2335.	*	*	2371	565.4	33.6	2220.1	81.3	8.003	*	32.1	2227.1	75.8	13.781	7.861	0.771	-5.0	-36.5							
206	4146	1.48	34.681	2427.	2313.	*	*	*	477.5	28.4	2190.0	93.8	8.071	*	28.9	2199.3	96.8	12.410	7.905	0.983	-1.9	-35.6							
207	4334	1.48	34.693	2433.	2343.	*	*	2355	560.1	33.8	2227.7	81.5	8.002	*	32.0	2236.2	74.9	14.953	7.820	0.761	-16.7	-51.1							
209	4729	1.49	34.687	2420.	2315.	*	*	2349	506.5	30.1	2196.0	80.8	8.046	*	28.3	2205.5	81.2	13.090	7.857	0.825	-16.2	-52.2							
225	5123	1.49	34.689	2420.	2316.	*	*	2339	510.1	30.3	2197.3	80.3	8.043	*	29.4	2207.6	80.0	14.513	7.838	0.914	-23.6	-61.2							
227	5639	1.5	34.693	2418.	2317.	*	*	2333	520.3	30.9	2199.4	86.7	8.035	*	28.8	2210.6	77.7	15.520	7.809	0.790	-34.7	-74.6							
234	5927	1.56	34.693	2413.	2297.	*	*	*	460.0	27.8	2174.8	94.4	8.077	*	25.6	2186.9	84.4	14.447	7.840	0.859	-33.1	-74.2							

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBON D REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
225	2	9 11 73	1329	30 34.0 N	170 36.5 E	5490
225	4	9 11 73	2229	30 36.0 N	170 36.5 E	5485
225	7	10 11 73	2104	30 42.0 N	170 30.0 E	5603

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (EO/KG)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATM, T=INSITU				CALC PARAMETERS P, T=INSITU				DELTA CO3= (M/KG)	DELTA CO3= (ARRG)	
					TC02 (M/KG)	GC (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	ICP (E-9)			(E-6)
701	8	24.73	35.055	2305	1938	* 1976	* 290.9	8.3	1671.9	257.7	8.305	* 8.3	1672.8	257.7	4.963	8.304	2.640	212.4	192.1
702	20	24.74	35.056	2306	1942	* 1977	* 295.3	8.4	1677.7	255.8	8.299	* 8.4	1677.9	255.8	5.025	8.299	2.628	218.4	198.8
703	36	24.75	35.053	2319	1953	* 1977	* 296.3	8.5	1686.9	257.6	8.301	* 8.5	1687.8	257.5	5.819	8.299	2.646	212.1	191.7
704	56	24.49	35.016	2298	1934	* 1974	* 289.3	8.3	1670.3	255.4	8.305	* 8.3	1678.5	255.2	4.976	8.303	2.528	209.6	189.2
705	82	23.60	35.085	2296	1941	* 1974	* 290.1	8.5	1683.5	248.9	8.382	* 8.5	1683.7	248.7	5.023	8.299	2.552	202.9	182.4
714	105	18.00	34.759	2291	1979	* 2033	* 276.2	9.5	1752.0	217.5	8.306	* 9.5	1752.2	217.3	4.981	8.303	2.214	171.1	150.4
725	157	16.05	34.697	2287	1992	* 2033	* 274.4	10.8	1776.7	205.2	8.304	* 10.8	1777.2	204.8	5.833	8.298	2.083	158.2	137.3
726	207	15.22	34.627	2280	2000	* 2033	* 294.8	11.0	1807.2	189.8	8.275	* 11.0	1807.8	189.3	5.397	8.269	1.921	142.3	121.3
728	308	13.35	34.549	2272	2030	* 2033	* 315.4	12.5	1849.1	169.5	8.244	* 12.4	1840.9	168.8	5.840	8.234	1.709	121.8	99.9
729	382	12.06	34.396	2272	2054	* 2089	* 339.6	14.0	1886.8	154.0	8.214	* 13.9	1886.9	153.2	6.384	8.208	1.545	104.8	83.4
730	456	10.39	34.277	2281	2090	* 2170	* 370.8	16.1	1937.8	136.9	8.178	* 16.8	1938.0	136.8	6.897	8.161	1.367	87.8	65.3
731	555	7.90	34.183	2280	2131	* 2170	* 415.1	19.6	1995.3	116.1	8.128	* 19.4	1996.4	115.1	7.802	8.189	1.151	55.2	43.2
401	591	7.34	34.056	2282	2164	* 2170	* 523.5	25.3	2044.9	93.8	8.835	* 25.1	2046.1	92.9	9.717	8.812	0.927	42.6	20.5
732	653	6.178	34.028	2292	2197	* 2170	* 594.5	29.9	2085.5	81.6	7.962	* 29.6	2086.7	80.7	11.054	7.956	0.804	29.8	7.5
402	687	5.60	34.031	2293	2228	* 2170	* 736.4	37.7	2123.3	67.0	7.894	* 37.4	2124.5	66.1	13.592	7.867	0.659	15.8	-7.4
403	835	4.35	34.131	2330	2293	* 2320	* 994.2	48.0	2109.6	55.5	7.815	* 47.6	2191.0	54.4	16.545	7.791	0.545	2.8	-20.8
404	982	3.69	34.265	2349	2333	* 2390	* 1845.0	57.4	2227.7	47.9	7.751	* 56.9	2229.2	46.9	19.493	7.710	0.471	-5.9	-30.1
405	1126	3.28	34.371	2369	2364	* 2390	* 1139.7	63.3	2256.1	44.6	7.718	* 62.7	2257.9	43.4	21.337	7.671	0.438	-11.6	-35.2
414	1274	2.94	34.440	2384	2358	* 2407	* 954.4	53.8	2251.9	52.2	7.790	* 53.2	2254.1	50.8	18.281	7.738	0.512	-5.6	-29.7
425	1421	2.63	34.489	2395	2354	* 2407	* 841.7	48.0	2247.7	50.3	7.842	* 47.3	2258.2	56.5	16.438	7.784	0.572	-1.1	-25.7
426	1616	2.41	34.531	2400	2379	* 2405	* 951.1	54.7	2260.1	52.2	7.792	* 53.8	2270.8	50.3	18.831	7.725	0.509	-9.2	-34.3
427	1712	2.10	34.560	2402	2361	* 2405	* 831.2	48.2	2254.4	58.4	7.846	* 47.3	2257.4	56.3	16.738	7.776	0.578	-4.1	-29.5
428	1850	2.02	34.501	2413	2354	* 2405	* 721.7	42.1	2245.6	66.3	7.905	* 41.2	2249.8	63.8	14.798	7.838	0.647	2.8	-23.9
429	2003	1.800	34.600	2414	2360	* 2390	* 795.2	46.6	2260.6	60.8	7.865	* 45.6	2264.2	58.2	16.477	7.783	0.598	-5.1	-31.4
430	2148	1.77	34.615	2414	2364	* 2407	* 767.8	45.2	2256.4	62.4	7.979	* 44.1	2268.2	59.6	16.176	7.791	0.605	-5.2	-31.9
431	2293	1.71	34.626	2417	2346	* 2423	* 653.4	38.5	2235.5	72.8	7.945	* 37.5	2239.8	68.7	14.863	7.852	0.697	2.4	-24.8
432	2442	1.65	34.639	2414	2351	* 2423	* 591.7	40.9	2241.9	68.2	7.921	* 39.7	2246.4	64.0	15.001	7.822	0.658	-3.1	-30.9
202	2649	1.597	34.648	2419	2353	* 2423	* 579.8	40.8	2243.4	69.6	7.931	* 38.9	2240.3	65.9	15.821	7.823	0.669	-4.3	-32.7
204	3025	1.512	34.663	2421	2334	* 2423	* 576.8	34.3	2220.8	79.7	7.995	* 33.8	2225.9	75.1	13.396	7.873	0.763	0.6	-29.8
205	3222	1.400	34.667	2424	2321	* 2363	* 514.2	30.6	2202.5	87.9	8.041	* 29.3	2209.0	82.7	12.240	7.912	0.840	5.9	-24.5
206	3416	1.462	34.673	2421	2332	* 2346	* 567.6	33.8	2217.5	80.7	8.001	* 32.3	2224.2	75.5	13.693	7.864	0.767	-3.9	-34.8
207	3610	1.452	34.677	2429	2322	* 2346	* 581.3	29.9	2202.8	90.1	8.032	* 28.4	2209.4	84.2	12.370	7.907	0.856	2.4	-29.3
209	3805	1.446	34.679	2417	2329	* 2346	* 570.1	34.0	2215.8	80.1	7.990	* 32.4	2222.3	74.3	14.205	7.845	0.755	-9.9	-42.4
209	4001	1.444	34.682	2420	2311	* 2352	* 491.4	29.3	2190.8	90.9	8.058	* 27.7	2190.9	84.3	12.633	7.998	0.857	-2.5	-35.7
210	4195	1.444	34.685	2419	2321	* 2346	* 531.2	31.6	2204.1	85.2	8.027	* 30.0	2212.5	70.6	13.847	7.859	0.799	-11.8	-44.9
211	4381	1.447	34.684	2418	2310	* 2342	* 494.4	29.5	2198.2	90.4	8.055	* 27.0	2199.1	83.2	13.172	7.880	0.846	-9.1	-43.7
212	4790	1.447	34.689	2412	2300	* 2342	* 507.8	30.2	2189.7	88.1	8.044	* 28.4	2199.2	88.4	14.845	7.852	0.818	-10.8	-54.2
215	4906	1.455	34.692	2400	2301	* 2317	* 495.1	29.5	2181.9	89.6	8.053	* 27.6	2191.9	81.4	14.009	7.854	0.820	-20.8	-57.1
216	5173	1.466	34.691	2412	2295	* 2317	* 432.9	25.8	2150.8	100.4	8.107	* 24.8	2169.7	91.4	12.544	7.902	0.929	-13.1	-51.0
217	5275	1.473	34.692	2407	2290	* 2330	* 408.1	25.8	2178.4	98.6	8.059	* 27.1	2189.8	81.9	14.199	7.848	0.833	-24.2	-62.5
218	5320	1.476	34.693	2405	2297	* 2316	* 450.8	27.3	2164.4	95.3	8.083	* 25.4	2175.3	86.3	13.444	7.871	0.878	-20.6	-59.1
219	5366	1.479	34.692	2399	2293	* 2316	* 496.2	29.5	2174.7	88.8	8.051	* 27.5	2185.4	88.1	14.591	7.836	0.815	-27.6	-56.3
224	5466	1.483	34.695	2400	2297	* 2316	* 401.4	20.6	2176.9	91.6	8.064	* 26.6	2187.8	82.6	14.261	7.846	0.840	-26.8	-63.9

CARBONATE REPORT

GEODECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
227	2	12 11 73	1212	25 0.8 N	178 5.3 E	5897
227	4	12 11 73	2142	25 4.5 N	178 3.8 E	5964
227	7	14 11 73	0225	25 12.3 N	178 5.5 E	5964

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/88)	MEASURED PARAMETERS				CALC PARAMETERS P-LATH-T*INSITU*					CALC PARAMETERS P.T*INSITU					DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARRG) (M/KG)
				TALK (EQ/KG) (E-6)	TIT (E-6)	GC TC02* (M/KG) (E-6)	TC02 (M/KG) (E-6)	PC02 (ATM) (M/KG) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3* (M/KG) (E-6)	PH	H2CO3* (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3* (M/KG) (E-6)	PH	PH		
782	11	26.6	35.212	2313.	1929.	* 1962	* 294.1	9.0	1651.2	269.7	8.386	* 8.2	1651.3	269.7	4.958	8.385	2.784	224.5	284.1
784	21	26.6	35.211	2316.	1923.	* 1960	* 283.7	7.7	1639.3	276.8	8.318	* 7.7	1639.4	275.9	4.812	8.318	2.848	238.6	210.3
725	91	22.71	35.114	2382.	1957.	* 1976	* 295.2	8.9	1786.2	241.9	8.294	* 8.9	1786.5	241.6	5.116	8.291	2.487	195.8	175.2
727	128	20.53	35.075	2311.	1976.	* 2811	* 284.1	9.1	1732.7	234.2	8.384	* 9.1	1732.7	234.2	5.014	8.380	2.488	188.8	167.4
729	208	16.66	34.732	2285.	1975.	* 2824	* 261.8	9.3	1750.4	215.3	8.321	* 9.3	1750.9	214.8	4.858	8.314	2.187	167.9	147.8
731	388	14.45	34.581	2294.	2022.	* 2852	* 381.2	11.5	1827.3	183.2	8.266	* 11.4	1828.8	182.5	5.553	8.255	1.858	134.8	113.7
732	349	13.18	34.467	2281.	2043.	* * 328.6	12.8	1863.8	167.2	8.248	* 12.7	1863.9	166.4	5.926	8.227	1.682	118.3	97.8	
733	449	19.781	34.275	2277.	2057.	* 2107	* 316.6	13.6	1888.7	154.7	8.237	* 13.5	1889.7	153.7	5.389	8.221	1.544	104.8	83.1
481	489	9.792	34.213	2287.	2187.	* 2137	* 388.8	17.2	1959.5	138.3	8.168	* 17.1	1960.5	129.4	7.289	8.142	1.298	88.1	58.3
734	548	8.58	34.124	2273.	2115.	* 2167	* 416.9	19.3	1979.2	116.5	8.126	* 19.2	1980.3	115.5	7.841	8.106	1.155	65.7	43.7
483	588	7.873	34.889	2384.	2166.	* * 457.9	22.3	2038.3	185.3	8.098	* 22.1	2039.5	184.3	8.554	8.868	1.842	54.1	32.8	
484	634	6.238	34.873	2387.	2235.	* 2255	* 718.2	36.8	2128.3	78.7	7.989	* 35.8	2129.4	59.8	13.864	7.884	8.698	19.2	-3.1
486	786	4.615	34.155	2347.	2311.	* 2314	* 918.2	48.8	2286.8	55.5	7.888	* 48.4	2288.1	54.5	16.723	7.777	8.546	2.5	-28.2
488	982	3.725	34.352	2382.	2328.	* 2376	* 784.8	43.8	2221.3	63.6	7.874	* 42.5	2223.1	62.4	14.636	7.835	8.628	8.6	-14.6
489	1086	3.372	34.413	2389.	2354.	* * 984.2	58.2	2248.8	55.9	7.816	* 49.6	2249.8	54.5	16.938	7.771	8.558	-8.1	-23.7	
418	1185	3.155	34.476	2392.	2345.	* 2376	* 817.6	45.7	2238.5	68.8	7.956	* 45.1	2248.6	59.3	15.556	7.888	8.599	3.8	-28.1
411	1258	2.975	34.588	2484.	2351.	* * 779.6	43.9	2243.5	63.6	7.877	* 43.3	2245.7	62.8	14.933	7.826	8.627	5.8	-18.2	
412	1356	2.784	34.515	2484.	2344.	* 2383	* 733.1	41.6	2235.7	66.7	7.981	* 48.9	2238.2	64.9	14.252	7.846	8.656	7.8	-16.5
415	1474	2.595	34.547	2414.	2362.	* * 779.1	44.5	2254.1	63.4	7.877	* 43.7	2256.8	61.5	15.238	7.817	8.622	3.3	-21.4	
416	1688	2.296	34.579	2417.	2354.	* 2386	* 789.2	48.9	2244.8	68.3	7.914	* 48.1	2247.9	66.8	14.256	7.946	8.669	5.8	-19.5
417	1885	2.894	34.681	2436.	2378.	* * 694.4	48.4	2239.6	78.1	7.925	* 39.5	2263.1	67.4	14.162	7.949	8.684	5.3	-28.6	
418	2081	1.918	34.623	2433.	2363.	* 2366	* 668.4	39.1	2252.1	71.8	7.939	* 38.1	2256.8	68.9	13.959	7.955	8.699	4.8	-21.8
419	2279	1.882	34.637	2436.	2354.	* * 618.8	35.9	2248.5	77.6	7.976	* 34.8	2244.9	74.3	13.849	7.884	8.754	8.1	-19.1	
428	2478	1.722	34.645	2448.	2363.	* 2355	* 632.4	37.3	2258.4	75.3	7.962	* 36.2	2255.2	71.7	13.733	7.862	8.729	3.5	-24.3
421	2672	1.652	34.554	2436.	2357.	* * 628.3	36.7	2244.2	76.2	7.968	* 35.5	2249.3	72.2	13.776	7.861	8.734	1.8	-26.6	
422	2946	1.613	34.661	2439.	2354.	* 2362	* 593.4	35.1	2239.7	79.1	7.987	* 33.9	2245.3	74.8	13.419	7.872	8.768	2.5	-26.6
282	3362	1.529	34.669	2423.	2332.	* * 561.3	33.3	2216.9	81.7	8.086	* 31.9	2223.5	76.6	13.468	7.871	8.778	-2.8	-32.8	
283	3564	1.512	34.675	2439.	2329.	* 2355	* 484.7	29.4	2287.7	91.9	8.859	* 28.8	2215.8	86.8	12.187	7.917	8.874	4.9	-26.6
284	3565	1.511	34.674	2425.	2328.	* 2345	* 537.9	32.8	2211.2	84.8	8.823	* 38.5	2218.3	79.2	13.178	7.888	8.805	-1.9	-33.4
285	3752	1.488	34.679	2424.	2328.	* * 518.8	38.4	2281.2	88.4	8.843	* 28.9	2288.8	82.3	12.786	7.893	8.837	-1.4	-33.6	
296	3964	1.488	34.682	2419.	2324.	* * 543.2	32.3	2288.8	83.6	8.818	* 38.7	2215.8	77.5	13.833	7.859	8.787	-8.9	-41.9	
287	4163	1.469	34.684	2431.	2317.	* 2334	* 477.5	28.4	2194.8	93.7	8.871	* 26.9	2293.4	86.9	12.428	7.986	8.882	-2.4	-36.1
288	4363	1.458	34.688	2428.	2317.	* * 512.9	38.5	2198.7	87.8	8.841	* 29.8	2287.4	88.7	13.599	7.966	8.821	-11.2	-45.8	
215	5368	1.463	34.696	2411.	2389.	* 2317	* 514.5	38.6	2191.3	87.1	8.838	* 28.6	2281.9	79.5	13.832	7.825	8.798	-29.2	-67.9
223	5863	1.586	34.698	2488.	2297.	* 2314	* 482.5	29.7	2176.6	91.7	8.863	* 26.5	2188.4	82.8	14.825	7.829	8.824	-34.4	-75.3

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBOHATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
229	2	15 11 73	1833	19 1.0 N	169 21.0 E	5386
228	3	16 11 73	0382	19 4.0 N	169 24.0 E	5299
228	5	16 11 73	0754	19 4.0 N	169 25.0 E	5297

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02 - 15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/100)	TALK (EQ/KG)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*				CALC PARAMETERS P,T=INSITU				DELTA CO3= (CALC)	DELTA CO3= (ARRG)	
					TIT (E-6)	GC TC02* (E-6)	GC TC02 (E-6)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AM (E-9)			PH
501	1	27.73	34.338	2387.	1512.	* 1942	* 285.3	7.7	1626.4	277.9	8.314	* 7.7	1626.4	277.9	4.858	8.314	2.846	232.8	212.5
502	98	27.73	34.955	2386.	1924.	* 1938	* 386.4	8.1	1646.7	269.1	8.295	* 8.1	1646.9	268.9	5.181	8.292	2.756	223.4	282.9
504	145	22.38	33.145	2323.	1982.	* 1994	* 382.8	9.2	1732.9	239.9	8.288	* 9.2	1733.3	239.5	5.214	8.283	2.467	193.3	172.6
505	224	17.28	34.314	2368.	2806.	* 2833	* 299.4	18.4	1798.8	285.7	8.282	* 18.3	1798.5	285.2	5.318	8.274	2.894	198.2	137.2
508	338	12.65	34.385	2281.	2874.	* 2892	* 373.5	15.1	1911.8	147.9	8.182	* 15.8	1911.8	147.2	6.764	8.178	1.484	99.2	77.8
510	442	9.11	34.171	2286.	2151.	* 2268	* 582.8	22.8	2824.3	183.9	8.058	* 22.7	2825.1	183.2	9.893	8.841	1.833	54.1	32.5
514	546	5.96	34.193	2384.	2226.	* 2268	* 786.2	34.5	2117.8	73.7	7.918	* 34.3	2118.8	72.9	12.693	7.896	8.731	23.8	1.8
526	693	5.488	34.328	2344.	2294.	* 2312	* 847.6	43.7	2188.9	51.4	7.844	* 43.4	2198.1	68.5	15.276	7.816	8.689	9.3	-13.2
528	951	4.496	34.472	2368.	2317.	* 2325	* 924.1	43.9	2211.8	62.1	7.955	* 43.5	2212.5	61.8	15.169	7.819	8.617	8.1	-14.9
538	1898	3.74	34.525	2395.	2319.	* 2337	* 678.3	36.7	2288.3	74.1	7.948	* 36.2	2218.3	72.5	12.696	7.898	8.734	17.9	-5.6
532	1336	3.87	34.559	2394.	2337.	* 2355	* 755.2	42.4	2229.5	65.1	7.888	* 41.7	2231.9	63.3	14.645	7.834	8.642	6.5	-17.8
534	1685	2.61	34.582	2416.	2355.	* 2355	* 728.8	41.5	2246.1	67.4	7.985	* 40.8	2249.1	65.2	14.468	7.848	8.661	5.8	-19.3
317	1715	2.42	34.594	2416.	2353.	* 2353	* 711.5	40.9	2243.9	68.2	7.913	* 40.1	2247.1	65.9	14.322	7.844	8.668	5.4	-19.9
318	1866	2.245	34.688	2419.	2356.	* 2365	* 788.4	41.8	2246.7	58.3	7.915	* 40.1	2258.2	65.7	14.479	7.839	8.667	3.8	-22.8
315	2862	2.814	34.625	2432.	2354.	* 2354	* 631.4	35.8	2241.6	75.6	7.962	* 35.9	2245.5	72.6	13.197	7.898	8.737	8.7	-17.8
328	2268	1.878	34.638	2434.	2347.	* 2363	* 588.4	34.5	2232.5	88.8	7.958	* 33.5	2236.9	76.6	12.591	7.908	8.778	18.6	-16.5
322	2461	1.765	34.649	2433.	2332.	* 2358	* 613.2	36.1	2238.8	77.1	7.973	* 35.8	2243.5	73.5	13.368	7.874	8.746	5.4	-22.3
321	2462	1.767	34.647	2429.	2345.	* 2358	* 598.2	35.2	2231.3	78.5	7.982	* 34.1	2236.1	74.8	13.874	7.884	8.759	6.7	-21.1
323	2557	1.688	34.597	2435.	2332.	* 2358	* 521.3	38.8	2213.1	88.2	8.838	* 29.7	2218.4	83.9	11.688	7.932	8.852	13.6	-14.7
281	2821	1.642	34.668	2438.	2328.	* 2328	* 522.9	38.9	2289.5	87.5	8.836	* 29.8	2215.2	83.8	11.929	7.923	8.843	18.9	-18.8
282	2821	1.642	34.655	2428.	2344.	* 2361	* 594.6	35.2	2238.5	78.4	7.984	* 33.9	2235.9	74.1	13.466	7.871	8.753	2.8	-26.9
283	3828	1.586	34.666	2425.	2343.	* 2358	* 585.7	34.7	2228.9	79.4	7.958	* 33.4	2234.7	74.9	13.529	7.869	8.761	8.5	-29.1
285	3418	1.511	34.673	2426.	2335.	* 2358	* 578.7	34.4	2224.8	79.8	7.994	* 32.9	2231.4	74.6	13.912	7.857	8.759	-4.6	-35.6
286	3615	1.485	34.577	2424.	2332.	* 2353	* 556.8	33.1	2216.6	82.3	8.889	* 31.6	2223.7	76.7	13.688	7.864	8.779	-5.1	-36.9
287	3816	1.457	34.688	2431.	2312.	* 2358	* 461.7	27.5	2198.8	96.5	8.885	* 26.1	2195.9	98.8	11.665	7.933	8.915	5.6	-26.9
288	4814	1.441	34.653	2421.	2299.	* 2359	* 449.5	25.8	2174.3	97.9	8.093	* 25.3	2182.7	91.8	11.639	7.934	8.925	3.9	-29.3
389	4211	1.419	34.687	2428.	2329.	* 2359	* 523.1	31.2	2202.6	86.2	9.833	* 29.5	2211.8	79.5	13.668	7.864	8.888	-18.3	-44.3
210	4411	1.414	34.688	2423.	2383.	* 2321	* 455.9	27.2	2179.9	96.9	8.888	* 25.6	2188.1	89.3	12.226	7.913	8.988	-3.4	-38.1
211	4689	1.483	34.691	2414.	2296.	* 2358	* 459.2	27.4	2173.1	95.5	8.884	* 25.7	2182.6	87.7	12.583	7.988	8.892	-7.9	-43.5
212	4889	1.482	34.693	2412.	2277.	* 2321	* 409.5	24.4	2147.7	184.9	8.128	* 22.8	2158.8	96.2	11.534	7.938	8.978	-2.5	-38.9
216	5812	1.412	34.694	2412.	2278.	* 2321	* 412.1	24.6	2149.1	184.3	8.126	* 22.9	2159.8	95.3	11.819	7.927	8.969	-6.6	-43.8

CARBONATE REPORT

GEOSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
229	3	18 11 73	1615	12 53.8 N	173 29.8 E	5729
229	5	18 11 73	2313	12 55.5 N	173 29.8 E	5715
229	7	19 11 73	0641	12 56.8 N	173 23.8 E	5729

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02==TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATM,T=INSITU*						CALC PARAMETERS P,T=INSITU							
SAMP NO	DEPTH (M)	TEMP (C)	SAL (E-03)	TALK (E-03)	TC02 (E-6)	GC TC02 (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (E-6)	DELTA CO3= (E-6)
704	30	27.96	34.434	2284.	1983.	1522	299.3	7.9	1626.4	268.7	0.302	7.9	1626.5	268.6	4.997	0.301	2.711	223.3	202.9
706	55	27.95	34.438	2275.	1983.	1922	384.4	8.1	1625.9	265.1	0.296	8.1	1630.8	264.9	5.080	0.294	2.673	219.5	199.1
708	92	27.22	34.838	2388.	1536.	1946	313.3	8.4	1663.8	262.6	0.287	8.4	1665.2	262.3	5.200	0.284	2.679	216.7	196.2
725	192	18.58	34.837	2318.	2031.	*	327.2	11.1	1817.5	282.4	0.252	11.0	1818.8	282.0	5.608	0.245	2.862	153.2	134.4
726	241	13.96	34.454	2288.	2102.	2113	449.6	17.4	1948.6	133.9	0.117	17.4	1949.2	133.5	7.783	0.109	1.358	88.2	67.1
727	301	10.37	34.292	2297.	2153.	*	584.1	21.9	2021.3	189.7	0.063	21.9	2021.9	189.2	8.073	0.052	1.898	61.3	48.8
728	350	9.86	34.330	2306.	2224.	2237	747.7	34.0	2113.7	76.3	7.904	33.8	2114.3	75.0	12.877	7.898	0.763	27.5	6.8
729	355	7.926	34.386	2310.	2240.	*	741.6	35.0	2138.7	74.3	7.984	34.9	2131.4	73.8	12.919	7.889	0.742	25.8	3.3
730	450	7.01	34.353	2321.	2289.	2257	998.8	48.7	2188.9	55.4	7.788	48.5	2181.7	54.9	17.328	7.761	0.553	5.6	-16.2
731	518	6.53	34.427	2348.	2267.	*	739.8	36.6	2198.4	71.9	7.983	36.4	2199.3	71.2	13.188	7.882	0.719	21.4	-8.5
583	553	6.834	34.467	2351.	2267.	2318	672.1	33.9	2155.0	77.4	7.941	33.6	2156.8	76.5	12.884	7.918	0.773	26.1	4.8
732	597	6.83	34.469	2358.	2274.	2318	713.4	36.8	2164.6	73.4	7.517	35.7	2165.7	72.6	12.783	7.893	0.734	22.2	8.8
584	651	5.586	34.489	2356.	2313.	*	988.3	46.6	2287.7	58.7	7.817	46.3	2288.8	57.9	16.226	7.798	0.585	6.7	-15.7
585	791	5.822	34.513	2366.	2317.	2324	854.1	44.6	2211.1	61.3	7.842	44.2	2212.4	60.3	15.474	7.818	0.618	8.3	-14.4
587	988	4.315	34.542	2382.	2325.	2351	885.9	43.2	2221.1	63.7	7.865	42.7	2222.9	62.4	14.937	7.826	0.632	8.7	-14.5
588	1886	3.948	34.558	2385.	2328.	*	718.1	38.6	2218.8	78.6	7.916	38.1	2212.8	69.1	13.482	7.873	0.788	14.5	-9.8
589	1185	3.631	34.565	2397.	2343.	2338	791.4	43.4	2235.6	63.9	7.872	42.9	2237.8	62.4	14.977	7.825	0.632	6.9	-16.9
518	1186	3.645	34.565	2397.	2344.	*	797.7	43.8	2236.7	63.5	7.869	43.2	2238.8	61.9	15.892	7.821	0.628	6.5	-17.3
511	1201	3.489	34.577	2485.	2341.	2361	728.4	48.3	2232.2	68.5	7.986	39.7	2234.5	66.7	13.967	7.855	0.677	18.4	-13.6
512	1465	3.123	34.585	2488.	2354.	*	788.8	43.7	2246.1	64.2	7.877	43.8	2248.7	62.3	15.128	7.828	0.632	4.9	-19.6
733	1933	2.717	34.688	2418.	2357.	2363	731.9	41.6	2248.8	67.4	7.983	48.8	2258.8	65.3	14.484	7.842	0.663	6.7	-18.2
734	1682	2.58	34.812	2424.	2368.	2359	711.8	48.8	2258.3	68.9	7.915	48.8	2253.5	66.6	14.228	7.847	0.676	6.5	-19.8
515	1835	2.362	34.628	2432.	2368.	2368	569.6	38.5	2248.5	72.8	7.948	37.7	2252.1	70.2	13.682	7.866	0.712	8.6	-17.1
517	1983	2.195	34.632	2425.	2313.	2363	495.9	28.7	2191.6	92.7	8.058	28.8	2195.6	89.4	18.478	7.988	0.989	26.4	8.2
516	1984	2.194	34.633	2424.	2335.	*	584.3	33.8	2228.3	98.9	7.993	33.8	2224.2	77.9	12.288	7.914	0.798	14.8	-11.4
516	2138	2.863	34.639	2429.	2325.	*	523.2	38.5	2286.8	98.6	8.037	29.6	2218.3	85.1	11.149	7.953	0.965	28.6	-6.1
519	2272	1.949	34.647	2436.	2353.	*	689.1	35.6	2239.2	78.2	7.977	34.6	2243.8	74.8	13.882	7.886	0.759	9.7	-18.4
523	2888	1.681	34.664	2442.	2368.	2357	518.1	36.8	2246.1	77.8	7.976	34.7	2251.7	73.5	13.798	7.868	0.747	8.8	-29.3
381	3844	1.635	34.667	2434.	2358.	*	596.7	35.3	2236.2	78.5	7.984	34.8	2242.1	73.9	13.762	7.861	0.751	-8.7	-38.4
382	3293	1.569	34.674	2437.	2348.	2356	543.8	32.2	2222.7	85.1	8.022	38.8	2229.2	79.9	12.884	7.888	0.813	2.3	-28.3
383	3548	1.511	34.677	2448.	2348.	*	531.4	31.5	2221.7	85.8	8.038	38.1	2229.8	81.1	12.912	7.889	0.824	8.3	-31.1
384	3791	1.463	34.688	2438.	2334.	2339	542.5	32.3	2217.3	84.4	8.028	38.7	2224.8	78.5	13.538	7.868	0.798	-5.6	-37.9
385	4839	1.425	34.685	2428.	2326.	*	518.8	38.9	2287.5	87.5	8.038	29.3	2215.6	81.8	13.383	7.876	0.824	-6.4	-39.7
388	4536	1.363	34.693	2422.	2311.	2319	483.9	28.9	2198.1	92.8	8.064	27.2	2199.3	84.5	13.891	7.883	0.859	-18.1	-45.3
389	4636	1.358	34.692	2423.	2389.	*	473.9	28.3	2187.8	93.6	8.072	26.6	2196.5	85.8	12.953	7.988	0.873	-18.2	-45.9
318	4787	1.333	34.697	2415.	2295.	2387	452.8	27.8	2171.3	96.6	8.098	25.3	2181.3	98.4	12.611	7.899	0.899	-18.8	-46.3
311	4986	1.329	34.699	2482.	2384.	*	523.3	31.3	2188.8	94.7	8.029	29.4	2197.8	76.8	14.823	7.829	0.782	-24.7	-61.8
312	5186	1.341	34.788	2486.	2292.	2381	469.3	28.1	2178.7	93.3	8.073	26.2	2181.2	84.6	13.683	7.866	0.868	-28.2	-58.2
324	5718	1.488	34.788	2485.	2384.	2296	515.2	38.7	2186.8	86.4	8.036	28.6	2198.1	77.3	15.594	7.887	0.787	-36.4	-76.6

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
231	5	22 11 73	1517	14 9.8 N	178 35.8 W	5661
231	7	23 11 73	0010	14 11.0 N	178 34.5 W	5639
231	9	23 11 73	0453	14 11.0 N	178 36.8 W	5675

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS			CALC PARAMETERS P=1 ATM, T=INSITU							CALC. PARAMETERS P, T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (ARAG)		
			SAL. (0/00)	TALK (EQ/KG)	TIT (M/KG)	TC02* (M/KG)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)			PH	ICP (M/KG)
711	4	27.22	34.632	2388.	1906.	* 1954	* 290.1	7.5	1621.1	277.4	8.324	* 7.5	1621.1	277.4	4.739	8.324	2.816	232.2	211.9
716	129	24.01	35.072	2319.	1952.	* 1994	* 206.2	8.3	1685.8	257.9	8.311	* 8.3	1686.1	257.6	4.938	8.306	2.648	211.5	198.9
717	190	18.37	34.871	2316.	2038.	*	* 326.9	11.1	1817.3	201.6	8.251	* 11.1	1817.8	201.2	5.639	8.244	2.056	154.4	133.5
719	396	9.02	34.459	2334.	2241.	*	* 700.9	31.9	2126.7	92.4	7.934	* 31.7	2127.4	91.9	12.859	7.919	0.827	33.2	11.6
720	551	6.91	34.482	2339.	2248.	* 2295	* 655.9	32.1	2135.1	80.8	7.952	* 31.8	2136.2	80.0	11.724	7.931	0.809	30.0	8.0
721	693	5.96	34.586	2352.	2313.	* 2335	* 953.2	48.2	2207.7	57.1	7.799	* 47.8	2208.9	56.3	16.932	7.771	0.569	5.1	-17.3
722	891	4.98	34.524	2377.	2343.	*	* 963.1	50.5	2237.1	55.4	7.794	* 50.1	2238.6	54.4	17.447	7.758	0.558	1.5	-21.4
723	1136	3.89	34.551	2380.	2327.	* 2366	* 753.4	41.0	2219.1	66.9	7.892	* 48.5	2221.1	65.4	14.247	7.846	0.662	10.4	-13.3
727	2122	2.02	34.638	2432.	2358.	*	* 550.9	38.0	2246.4	73.7	7.950	* 37.0	2250.4	70.6	13.557	7.865	0.717	6.1	-20.5
728	2367	1.06	34.647	2440.	2361.	*	* 626.5	36.7	2249.8	76.3	7.966	* 35.7	2252.5	72.8	13.461	7.971	0.739	5.0	-21.7
732	3359	1.50	34.575	2434.	2322.	*	* 486.0	23.9	2200.3	92.8	8.055	* 27.6	2207.2	97.2	11.711	7.931	0.987	9.7	-22.1
734	3865	1.439	34.581	2432.	2337.	*	* 546.3	32.6	2229.4	84.0	8.017	* 31.0	2228.1	78.0	13.728	7.962	0.793	-7.1	-39.8
525	5020	1.32	34.699	2494.	2282.	*	* 442.7	26.5	2153.1	57.4	8.096	* 24.7	2168.5	89.8	12.539	7.996	0.903	-13.3	-50.6
526	5120	1.32	34.700	2480.	2295.	* 2253	* 401.0	30.0	2179.2	87.8	8.046	* 29.0	2188.6	79.4	14.553	7.337	0.308	-25.0	-64.1
529	5420	1.36	34.700	2493.	2291.	* 2311	* 475.1	29.4	2170.5	92.1	8.068	* 26.4	2181.5	93.1	14.079	7.951	0.945	-25.6	-64.6

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 233 3 26 11 73 1138 18 14.8 N 169 9.8 W 4976
 233 4 26 11 73 1636 18 14.8 N 163 8.8 W 4903

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*					CALC PARAMETERS P,T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (M/KG)			
				TALK (E-6)	TIT (M/KG)	GC (M/KG)	TC02* (M/KG)	PC02 (M/KG)	M2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	M2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AM (E-9)	PH			ICP (E-6)		
418	4	26.54	34.656	2297.	1929.	*	1542	*	385.7	8.4	1681.8	239.6	8.293	*	8.4	1661.8	239.6	5.188	8.292	2.638	214.4	194.1
420	49	26.54	34.663	2291.	1926.	*		*	388.1	8.4	1668.2	237.3	8.299	*	8.4	1668.4	237.2	5.158	8.288	2.614	211.8	191.3
421	75	26.62	34.857	2316.	1943.	*	1958	*	387.8	8.4	1671.3	263.3	8.293	*	8.4	1671.5	263.1	5.116	8.291	2.689	217.5	197.1
422	99	25.23	34.811	2389.	1953.	*		*	311.8	8.8	1692.9	251.3	8.285	*	8.8	1693.2	251.8	5.238	8.282	2.562	285.2	184.7
424	198	17.18	34.716	2384.	2864.	*		*	386.4	13.6	1879.1	171.2	8.186	*	13.6	1879.6	178.8	6.628	8.179	1.738	124.8	183.1
425	248	14.81	34.483	2254.	2873.	*	2893	*	387.3	15.8	1986.9	151.1	8.173	*	15.8	1987.5	158.6	6.849	8.164	1.518	183.2	92.1
426	346	9.87	34.184	2286.	2113.	*		*	408.2	18.8	1968.7	126.3	8.143	*	17.9	1969.5	125.6	7.412	8.138	1.259	77.3	55.9
427	396	9.48	34.139	2298.	2141.	*	2195	*	447.1	28.7	2888.6	111.7	8.182	*	28.6	2889.4	111.8	8.181	8.887	1.111	62.3	48.7
428	544	6.15	34.235	2322.	2283.	*		*	941.3	47.3	2179.3	56.4	7.881	*	47.1	2188.2	55.8	16.641	7.779	8.368	5.8	-16.3
429	543	5.618	34.354	2347.	2279.	*	2328	*	743.8	38.1	2171.4	69.5	7.898	*	37.8	2172.5	68.7	13.487	7.873	8.692	17.9	-4.4
430	742	5.33	34.429	2355.	2288.	*		*	745.3	38.5	2188.3	69.2	7.897	*	38.2	2181.6	68.2	13.558	7.868	8.688	16.6	-6.8
431	840	4.92	34.475	2368.	2297.	*	2338	*	716.8	37.6	2188.2	71.2	7.913	*	37.2	2189.7	78.1	13.181	7.888	8.788	17.6	-3.2
432	988	4.26	34.513	2388.	2328.	*		*	723.3	38.9	2211.8	78.2	7.918	*	38.4	2212.8	68.8	13.466	7.871	8.696	15.1	-8.1
433	1185	3.658	34.542	2395.	2345.	*	2363	*	816.8	44.8	2238.8	62.1	7.859	*	44.2	2240.1	68.7	15.428	7.812	8.614	5.2	-18.6
381	1336	3.334	34.559	2481.	2361.	*	2387	*	874.2	48.6	2254.4	58.1	7.831	*	47.9	2256.7	56.4	16.728	7.777	8.972	-8.4	-24.6
383	1534	2.828	34.583	2412.	2354.	*	2391	*	758.1	42.4	2245.6	66.8	7.893	*	41.7	2248.4	63.9	14.758	7.831	8.648	5.3	-19.5
384	1729	2.484	34.598	2428.	2364.	*		*	754.7	43.3	2255.5	65.2	7.898	*	42.4	2258.7	62.9	15.131	7.828	8.658	2.4	-23.8
385	1928	2.162	34.619	2429.	2369.	*	2389	*	726.3	42.1	2259.7	67.2	7.988	*	41.2	2263.3	64.5	14.868	7.828	8.655	2.8	-24.8
387	2329	1.818	34.648	2432.	2378.	*	2398	*	787.4	41.6	2268.3	68.1	7.915	*	40.5	2264.6	64.9	15.183	7.821	8.659	-1.7	-29.1
388	2538	1.785	34.652	2436.	2355.	*		*	812.6	38.1	2241.7	77.2	7.974	*	35.8	2246.6	73.4	13.428	7.972	8.746	4.6	-23.4
389	2738	1.617	34.659	2437.	2357.	*	2388	*	815.2	36.4	2243.9	76.7	7.972	*	35.2	2249.2	72.6	13.744	7.962	8.738	1.6	-27.1
318	2929	1.593	34.663	2438.	2363.	*		*	838.2	37.8	2258.9	74.3	7.957	*	36.5	2256.5	78.8	14.494	7.839	8.711	-3.3	-32.6
311	3138	1.527	34.671	2448.	2354.	*	2367	*	587.8	34.9	2239.4	79.7	7.998	*	33.5	2245.5	74.9	13.665	7.864	8.761	-9.8	-38.3
312	3328	1.497	34.674	2438.	2347.	*		*	585.2	33.6	2231.3	82.8	8.885	*	32.2	2237.9	76.9	13.428	7.872	8.782	-1.2	-31.9
314	3339	1.496	34.674	2434.	2346.	*	2367	*	576.4	34.3	2231.3	88.5	7.997	*	32.8	2237.8	75.4	13.716	7.863	8.766	-2.9	-33.6
315	3536	1.478	34.678	2438.	2336.	*		*	522.5	31.1	2217.2	87.7	8.837	*	29.7	2224.3	82.8	12.728	7.898	8.934	1.3	-38.1
316	3735	1.457	34.688	2438.	2329.	*	2381	*	496.8	29.6	2208.1	91.3	8.857	*	28.1	2215.7	85.2	12.361	7.988	8.866	1.9	-38.3
317	3935	1.458	34.681	2433.	2338.	*		*	516.5	38.8	2211.1	88.1	8.848	*	29.2	2219.1	81.7	13.898	7.883	8.331	-4.2	-37.2
318	4083	1.452	34.685	2434.	2344.	*	2354	*	567.6	33.9	2228.7	81.5	8.883	*	32.1	2236.7	75.2	14.498	7.839	8.765	-12.8	-46.3
319	4238	1.454	34.685	2433.	2329.	*		*	513.1	38.6	2209.8	88.6	8.843	*	28.9	2218.4	81.8	13.366	7.874	8.331	-8.3	-42.3
328	4385	1.439	34.697	2427.	2312.	*	2348	*	473.5	28.2	2189.5	94.3	8.874	*	28.6	2198.5	86.9	12.689	7.899	8.884	-5.4	-48.8
321	4543	1.385	34.691	2421.	2295.	*		*	438.9	26.1	2168.8	188.1	8.184	*	24.5	2178.4	92.2	11.918	7.924	8.937	-2.5	-37.8
322	4639	1.353	34.695	2414.	2382.	*	2324	*	477.8	28.6	2191.1	92.3	8.888	*	28.8	2198.7	84.5	13.176	7.888	8.839	-12.5	-48.5
323	4857	1.338	34.696	2418.	2384.	*		*	497.4	29.8	2185.1	89.1	8.851	*	27.9	2194.9	81.2	13.913	7.857	8.826	-18.3	-54.8

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 237 1 9 12 73 2240 12 38.3 N 165 25.3 W 5934
 237 2 9 12 73 2380 12 29.7 N 165 25.3 W 5163

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (P/1000)	TALK (EQ/KG)	MEASURED PARAMETERS		CALC PARAMETERS P=1ATM, T=INSITU								DELTA CO3= (CALC)	DELTA CO3= (ARAG)			
					TIT (E-6)	TC02 (E-6)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)			AM (E-9)	PH	ICP (E-6)
281	3	26.41	34.293	2244.	2886.	* 1932	* 548.0	14.9	1817.7	173.5	8.885	* 14.9	1817.7	173.5	0.224	0.885	1.739	128.3	187.9
282	33	26.48	34.284	2274.	1915.	*	* 385.4	8.4	1653.1	253.5	8.291	* 8.4	1653.2	253.4	3.125	0.290	2.541	288.0	187.6
283	52	24.47	34.648	2388.	1978.	* 1973	* 325.4	9.4	1721.4	239.2	8.268	* 9.4	1721.5	239.1	3.418	0.266	2.420	193.5	173.1
284	92	28.43	34.868	2329.	2816.	* 2838	* 317.4	18.2	1794.7	221.1	8.269	* 18.2	1795.8	223.9	3.426	0.266	2.250	174.9	154.2
285	126	15.33	34.537	2299.	2887.	* 2899	* 417.8	15.4	1918.6	152.9	8.132	* 15.4	1918.9	152.7	7.126	0.147	1.546	186.2	83.4
286	151	12.72	34.357	2295.	2136.	* 2153	* 585.8	28.4	1998.2	119.5	8.878	* 28.3	1996.5	119.2	8.613	0.865	1.281	72.4	51.5
287	258	18.99	34.494	2312.	2231.	*	* 816.3	34.9	2119.5	76.6	7.877	* 34.8	2119.8	76.4	13.514	7.869	8.772	29.1	8.1
288	298	9.37	34.598	2326.	2242.	*	* 773.9	34.2	2129.7	78.1	7.896	* 34.1	2138.2	77.7	12.988	7.888	3.787	38.1	8.9
289	299	9.44	34.616	2325.	2271.	* 2288	* 958.8	43.8	2164.2	63.8	7.887	* 42.9	2164.7	63.5	16.888	7.796	8.644	13.5	-5.8
218	374	8.55	34.582	2331.	2279.	*	* 942.5	43.5	2172.7	62.8	7.811	* 43.3	2173.3	62.3	15.968	7.797	8.632	13.8	-7.3
211	449	7.95	34.561	2338.	2386.	* 2388	* 1883.1	51.8	2288.4	54.5	7.753	* 58.8	2281.2	54.8	18.391	7.735	8.547	4.9	-16.9
212	546	6.98	34.527	2348.	2385.	*	* 956.1	46.7	2199.4	58.9	7.881	* 46.5	2258.3	58.2	16.618	7.788	8.989	8.3	13.7
225	645	6.23	34.521	2354.	2318.	* 2334	* 987.6	49.4	2212.6	56.8	7.786	* 49.1	2213.7	55.2	17.368	7.768	8.559	4.5	17.8
226	793	5.383	34.527	2369.	2339.	* 2344	* 1886.8	52.1	2233.1	53.8	7.776	* 51.7	2234.5	52.9	18.813	7.744	8.536	8.9	-21.8
227	991	4.52	34.546	2393.	2349.	*	* 884.8	47.8	2242.2	59.8	7.838	* 46.5	2243.9	58.6	16.282	7.798	8.593	4.9	-18.4
228	1189	3.76	34.568	2483.	2358.	* 2364	* 883.5	43.9	2242.4	63.6	7.868	* 43.3	2244.5	62.1	15.145	7.828	8.629	6.6	-17.2
229	1397	3.21	34.586	2414.	2356.	* 2363	* 762.8	42.5	2247.4	66.1	7.888	* 41.8	2249.9	64.3	14.783	7.833	8.651	7.8	-17.4
230	1593	2.782	34.681	2422.	2371.	*	* 793.9	45.8	2262.9	63.1	7.871	* 44.2	2265.8	61.8	15.592	7.887	8.619	1.9	-23.1
231	1791	2.41	34.621	2435.	2375.	* 2377	* 736.1	42.3	2265.3	67.4	7.982	* 41.4	2268.6	65.8	14.775	7.838	8.639	3.9	-21.7
232	1978	2.145	34.634	2444.	2376.	* 2377	* 688.6	48.8	2264.9	71.2	7.938	* 39.8	2268.6	68.4	14.122	7.858	8.694	5.4	-28.8
233	2175	2.882	34.642	2447.	2369.	*	* 636.9	37.2	2255.9	76.8	7.981	* 36.2	2268.8	72.8	13.371	7.874	8.739	7.8	-19.8
181	2298	1.984	34.658	2447.	2378.	* 2397	* 639.8	37.4	2257.1	75.5	7.959	* 36.4	2261.5	72.1	13.568	7.868	8.733	6.8	-21.2
234	2371	1.34	34.656	2447.	2368.	*	* 619.5	36.4	2252.2	77.4	7.972	* 35.3	2256.8	73.9	13.291	7.876	8.751	6.8	-28.6
182	2486	1.798	34.659	2458.	2388.	* 2374	* 671.4	39.5	2268.3	72.2	7.939	* 38.3	2273.8	68.6	14.486	7.839	8.697	8.3	-27.5
183	2685	1.726	34.665	2458.	2359.	*	* 574.2	33.8	2242.7	82.4	8.882	* 32.7	2248.1	79.3	12.743	7.895	8.795	7.7	-28.4
184	2887	1.555	34.679	2457.	2363.	* 2391	* 563.8	33.3	2245.6	84.1	8.811	* 32.8	2251.4	79.6	12.722	7.895	8.889	6.8	-22.7
185	3887	1.589	34.672	2447.	2353.	* 2373	* 558.1	33.1	2236.1	83.8	8.812	* 31.8	2242.2	79.8	12.915	7.989	8.883	3.8	-26.8
187	3487	1.512	34.678	2446.	2354.	* 2355	* 564.3	33.5	2237.7	82.8	8.887	* 32.1	2244.6	77.4	13.562	7.868	8.786	-2.7	-34.8
188	3686	1.476	34.679	2458.	2329.	* 2353	* 461.5	27.5	2283.4	98.1	8.888	* 26.1	2211.2	91.8	11.432	7.942	8.933	9.1	-22.9
189	3884	1.433	34.684	2443.	2329.	*	* 481.1	28.7	2286.2	94.1	8.878	* 27.2	2214.2	87.6	12.142	7.916	8.891	2.3	-38.4
118	4886	1.397	34.687	2448.	2323.	* 2348	* 469.8	28.8	2199.3	95.7	8.879	* 25.5	2287.8	88.7	12.128	7.917	8.982	8.6	-32.9
111	4284	1.373	34.698	2425.	2319.	*	* 582.3	38.8	2199.5	89.5	8.858	* 28.3	2288.2	92.5	13.225	7.879	8.839	-8.4	-42.7
112	4484	1.337	34.694	2419.	2324.	*	* 548.7	32.3	2288.8	83.7	8.819	* 38.5	2216.8	76.7	14.484	7.839	8.788	-17.2	-52.2
114	4682	1.386	34.697	2428.	2317.	* 2274	* 518.8	38.5	2198.7	87.7	8.843	* 28.7	2288.1	88.2	13.952	7.855	8.816	-16.6	-52.5
117	4938	1.318	34.698	2419.	2298.	* 2329	* 458.3	27.8	2193.7	97.3	8.892	* 25.2	2184.8	88.8	12.717	7.896	8.984	-11.8	-48.7
122	5881	1.389	34.699	2412.	2298.	* 2338	* 478.8	28.1	2175.5	93.3	8.874	* 26.3	2186.7	85.8	13.363	7.874	8.864	-16.9	-54.8

CARBONATE REPORT

GEOSSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
230	2	10 12 73	1804	9 11.9 N	167 4.5 W	5283
230	3	10 12 73	1724	9 11.9 N	167 4.5 W	5193
230	4	10 12 73	2120	9 11.9 N	167 4.5 W	5189
230	5	10 12 73	2312	9 11.9 N	167 4.5 W	5191

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS				*CALC PARAMETERS P.=1ATM.T.=INSITU*							CALC PARAMETERS P.T.=INSITU					DELTA	DELTA			
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EQ/KG)	TC02* (M/KG)	GC TC02** (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3* (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH	ICP (M/KG)	(CALC) (M/KG)	(ARRG) (M/KG)	
				(E-6)	(E-6)	(E-6)	(E-5)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)	
502	9	27.11	34.894	2266.	1936.	*	338.1	9.1	1680.8	246.9	8.257	9.1	1680.8	246.9	5.533	8.257	2.523	201.7	181.3	
506	72	26.76	34.971	2297.	1966.	*	1902	369.3	18.8	1721.3	234.7	8.227	18.8	1721.5	234.5	5.965	8.224	2.484	188.9	168.5
509	106	22.42	34.934	2380.	1987.	*	2004	326.4	9.9	1758.6	226.5	8.268	9.9	1758.9	226.2	5.538	8.257	2.317	180.3	159.7
514	176	13.83	34.927	2279.	2156.	*	2179	667.1	26.8	2038.9	99.1	7.963	25.9	2031.2	98.9	11.851	7.957	1.881	52.8	31.8
526	242	10.9	34.722	2296.	2246.	*	2386	1635.8	44.2	2139.9	61.9	7.777	44.1	2148.3	61.7	17.861	7.768	8.620	14.2	-7.8
301	262	10.569	34.713	2301.	2261.	*	1109.1	47.8	2159.4	57.8	7.748	47.7	2159.8	57.5	10.267	7.738	8.585	9.8	-11.4	
303	343	9.741	34.685	2385.	2256.	*	2266	1888.4	44.4	2180.4	61.3	7.788	44.2	2158.9	60.9	16.816	7.774	8.619	12.6	-9.9
304	403	9.288	34.661	2311.	2253.	*	914.3	41.3	2146.6	65.1	7.923	41.1	2147.3	64.6	15.585	7.907	9.657	15.9	-5.7	
306	554	7.653	34.583	2334.	2371.	*	835.4	39.8	2163.8	67.4	7.857	39.5	2164.8	66.7	14.612	7.835	8.676	16.8	-5.2	
307	629	6.792	34.554	2328.	2383.	*	1091.3	53.5	2198.1	51.3	7.743	53.2	2199.1	50.6	19.158	7.718	8.513	8.8	-22.2	
308	704	6.156	34.545	2333.	2381.	*	2335	1087.9	58.6	2196.5	53.9	7.773	58.2	2197.7	53.1	17.977	7.745	8.539	1.9	-28.5
310	844	5.337	34.544	2341.	2327.	*	2334	1134.8	56.6	2221.1	47.3	7.723	58.1	2222.4	46.4	28.587	7.688	8.478	-6.8	-28.8
427	969	4.72	34.553	2358.	2314.	*	2348	938.3	49.1	2289.3	55.5	7.883	48.6	2211.8	54.4	17.232	7.764	8.551	8.9	-22.3
202	1287	3.612	34.588	2398.	2325.	*	2376	683.9	37.6	2214.9	72.6	7.931	37.8	2217.2	78.8	13.198	7.888	8.718	14.5	-9.6
203	1427	3.325	34.598	2396.	2345.	*	888.5	44.5	2238.8	62.6	7.866	43.8	2248.5	68.7	15.552	7.888	8.616	3.1	-21.4	
204	1586	2.873	34.602	2412.	2327.	*	2377	612.4	34.6	2213.8	78.6	7.975	33.9	2216.8	76.3	12.251	7.912	8.774	17.1	-7.8
206	1802	2.327	34.631	2415.	2345.	*	2383	672.4	38.8	2234.8	71.4	7.935	37.9	2238.4	68.8	13.815	7.868	8.698	6.7	-19.2
207	2036	2.158	34.639	2419.	2352.	*	685.4	39.8	2242.1	78.1	7.927	38.8	2245.9	67.3	14.271	7.946	8.684	3.8	-22.6	
208	2182	2.844	34.649	2426.	2358.	*	2398	679.9	39.6	2247.7	78.7	7.931	38.6	2251.7	67.7	14.343	7.843	8.687	2.6	-24.2
429	2704	1.8	34.665	2432.	2348.	*	599.7	35.3	2234.3	78.5	7.982	34.1	2239.5	74.4	13.382	7.873	8.756	3.7	-24.8	
431	3004	1.693	34.671	2434.	2343.	*	2349	568.9	33.6	2227.4	82.1	8.003	32.3	2233.3	77.4	13.899	7.883	8.787	3.3	-26.3
432	3183	1.532	34.674	2433.	2342.	*	567.3	33.5	2226.5	82.8	8.004	32.2	2232.6	77.2	13.199	7.879	8.795	1.9	-28.8	
433	3283	1.62	34.675	2438.	2338.	*	2357	561.7	33.2	2222.3	82.4	8.007	31.9	2228.6	77.5	13.219	7.879	8.788	8.9	-29.3
434	3388	1.577	34.677	2431.	2338.	*	557.5	33.8	2221.9	93.8	8.818	31.7	2228.4	77.9	13.248	7.878	8.792	8.2	-30.4	
314	3348	1.586	34.677	2429.	2336.	*	2359	556.8	33.8	2228.1	92.9	8.818	31.6	2226.7	77.8	13.298	7.876	8.798	-8.5	-31.2
316	3638	1.479	34.684	2422.	2312.	*	2334	488.9	29.1	2191.5	91.4	9.061	27.7	2198.9	85.4	12.144	7.916	8.869	3.4	-28.4
317	3787	1.426	34.686	2419.	2332.	*	575.1	34.3	2218.8	79.7	7.995	32.7	2223.4	74.8	14.373	7.842	8.752	-18.1	-42.4	
318	3937	1.374	34.698	2414.	2317.	*	532.8	31.8	2208.7	84.6	9.825	38.2	2208.5	78.4	13.578	7.867	8.797	-7.7	-48.6	
320	4236	1.292	34.696	2485.	2388.	*	2384	498.3	29.9	2181.7	88.5	8.849	28.2	2198.2	81.6	13.191	7.888	8.838	-8.7	-42.8
321	4385	1.278	34.698	2481.	2299.	*	472.9	28.3	2168.6	92.8	8.869	26.7	2177.6	84.7	12.757	7.894	8.862	-7.7	-42.4	
322	4535	1.275	34.699	2482.	2296.	*	2328	493.1	29.6	2177.5	88.8	9.853	27.8	2186.7	81.4	13.448	7.871	8.828	-13.2	-48.5
212	4774	1.291	34.781	2484.	2388.	*	2316	581.1	38.8	2182.1	97.9	8.847	28.2	2191.6	88.1	13.947	7.856	8.915	-18.1	-54.4
214	4922	1.298	34.788	2397.	2287.	*	2389	479.1	28.7	2167.3	98.9	8.863	26.9	2177.3	82.8	13.596	7.967	8.842	-17.7	-54.6
223	5161	1.385	34.788	2483.	2294.	*	2388	484.2	29.8	2174.5	98.5	8.868	27.1	2184.9	82.8	14.881	7.854	8.934	-22.4	-68.3

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

GEOSECS PACIFIC	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	90T DEPTH
	239	1	12 12 73	1249	5 53.8 N	172 8.9 W	5611
	239	3	12 12 73	2237	5 54.8 N	172 8.8 W	5772
	239	5	13 12 73	3548	5 53.3 N	172 2.2 W	5779

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02*(M/KG) = TC02-15 (UM/KG)

JAMP NO	DEPTH (M)	TEMP. (C)	SAL. (800) (E-6)	TALK (E-6)	TILT (E-6)	MEASURED PARAMETERS		CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU			DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)				
						TC02*(M/KG)	TC02*(E-6)	PC02 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	AM (E-9)			PM (E-9)	ICP (E-6)		
502	58	25.57	35.835	2322.	2802.	*	2805	*	375.5	18.6	1763.7	227.7	8.218	*	10.6	1763.8	227.6	6.881	8.216	2.338	182.1	161.6
503	85	25.27	35.119	2322.	2805.	*	2805	*	398.4	18.9	1775.2	222.9	9.200	*	10.9	1775.4	222.7	6.231	8.205	2.292	177.8	156.5
504	130	25.48	35.319	2335.	2825.	*	2822	*	404.3	11.3	1792.5	221.1	8.196	*	11.3	1792.8	220.9	6.432	8.192	2.207	174.9	154.4
506	210	21.21	34.397	2307.	2850.	*	2867	*	442.4	13.5	1864.9	175.3	8.148	*	13.8	1863.3	175.8	7.226	8.141	1.829	132.2	111.3
525	244	14.88	34.500	2392.	2171.	*	*	*	648.9	25.1	2841.8	184.2	7.979	*	25.8	2842.2	183.8	18.728	7.978	1.853	56.5	35.4
526	299	18.89	34.666	2324.	2237.	*	2252	*	764.8	33.5	2123.9	79.6	7.981	*	33.4	2124.4	79.2	12.395	7.898	0.885	31.2	9.9
527	373	9.10	34.655	2316.	2248.	*	*	*	946.7	38.3	2140.8	69.8	7.853	*	38.1	2148.6	69.3	14.448	7.848	0.784	28.8	-8.7
528	446	8.46	34.621	2325.	2251.	*	2267	*	767.4	35.5	2149.8	74.5	7.894	*	35.3	2141.6	74.8	13.291	7.876	0.751	24.3	3.2
530	641	6.93	34.568	2336.	2297.	*	2299	*	983.8	40.8	2192.1	56.9	7.788	*	47.7	2153.1	56.2	17.284	7.762	0.959	9.5	-16.7
532	859	5.13	34.545	2352.	2310.	*	2317	*	936.9	43.5	2283.9	62.6	7.858	*	43.1	2285.4	61.5	15.286	7.816	0.623	9.9	-13.9
534	1037	4.31	34.362	2373.	2337.	*	*	*	925.4	49.6	2231.4	56.8	7.807	*	49.1	2233.2	54.7	17.175	7.765	0.555	8.6	-22.7
303	1204	3.923	34.370	2395.	2331.	*	*	*	795.5	43.2	2224.8	63.7	7.865	*	42.7	2226.2	62.2	15.186	7.821	0.638	6.6	-17.2
304	1354	3.484	34.586	2400.	2337.	*	2358	*	735.8	48.6	2228.3	68.1	7.981	*	48.8	2239.8	66.2	14.215	7.847	0.671	9.3	-15.8
306	1649	2.811	34.688	2422.	2346.	*	2353	*	656.9	37.2	2234.3	74.5	7.948	*	36.4	2237.4	72.1	13.115	7.882	0.732	12.4	-12.8
307	1795	2.557	34.621	2421.	2357.	*	*	*	712.5	40.7	2247.4	68.8	7.914	*	39.5	2258.8	66.4	14.488	7.842	0.674	5.2	-28.4
308	1945	2.383	34.631	2423.	2365.	*	2359	*	741.6	42.7	2256.2	66.1	7.897	*	41.7	2259.8	63.5	15.187	7.819	0.645	8.9	-25.2
309	2053	2.218	34.639	2448.	2353.	*	*	*	598.5	34.6	2238.1	88.2	7.986	*	33.7	2242.2	77.1	12.519	7.982	0.782	12.9	-13.6
311	2398	1.942	34.655	2448.	2367.	*	2371	*	656.7	38.4	2255.2	73.4	7.947	*	37.3	2259.8	69.9	14.899	7.851	0.718	2.6	-25.8
312	2535	1.888	34.658	2442.	2363.	*	*	*	627.9	36.8	2245.9	76.3	7.966	*	35.6	2254.8	72.6	13.693	7.864	0.737	3.7	-24.3
314	2788	1.819	34.663	2449.	2354.	*	2361	*	555.1	32.8	2236.8	84.4	8.813	*	31.7	2242.2	80.1	12.436	7.965	0.814	9.5	-19.8
316	2999	1.786	34.668	2437.	2347.	*	2351	*	574.8	33.9	2231.5	91.6	8.888	*	32.6	2237.4	77.8	13.188	7.888	0.783	2.9	-26.6
317	3149	1.644	34.572	2437.	2352.	*	*	*	593.4	35.1	2237.9	79.8	7.986	*	33.7	2244.8	74.3	13.887	7.868	0.755	-1.6	-31.5
318	3298	1.595	34.574	2442.	2348.	*	*	*	525.7	31.1	2221.1	87.8	8.835	*	29.8	2227.7	82.5	12.475	7.984	0.938	4.8	-25.8
328	3588	1.549	34.678	2429.	2342.	*	2338	*	588.8	34.4	2227.8	79.8	7.994	*	32.9	2234.6	74.5	14.824	7.853	0.757	-5.7	-37.8
321	3598	1.526	34.638	2431.	2339.	*	2333	*	559.5	33.2	2223.4	92.4	8.888	*	31.7	2238.5	76.8	13.674	7.864	0.781	-4.7	-36.3
322	3636	1.581	34.681	2426.	2355.	*	*	*	652.2	38.9	2244.1	72.2	7.946	*	37.1	2251.8	66.9	16.888	7.796	0.688	-15.9	-47.9
182	3816	1.489	34.686	2429.	2319.	*	2337	*	498.2	29.2	2198.1	91.7	9.868	*	27.8	2285.9	85.4	12.353	7.988	0.868	1.8	-31.5
183	3966	1.361	34.687	2422.	2322.	*	*	*	522.9	31.2	2284.5	86.3	8.833	*	29.7	2212.4	88.8	13.358	7.875	0.813	-6.5	-39.6
184	4115	1.318	34.692	2428.	2313.	*	2365	*	496.2	29.7	2193.4	89.9	9.854	*	28.1	2281.8	83.1	12.988	7.889	0.845	-5.4	-39.8
186	4414	1.259	34.697	2413.	2299.	*	2313	*	469.4	28.2	2177.5	93.4	8.874	*	26.5	2186.5	86.8	12.644	7.898	0.874	-6.9	-41.7
187	4565	1.245	34.699	2405.	2310.	*	*	*	566.4	34.8	2284.7	79.3	7.998	*	32.1	2213.5	72.4	15.368	7.814	0.736	-22.7	-58.1
188	4715	1.249	34.699	2489.	2318.	*	2312	*	551.1	33.1	2283.6	91.3	8.818	*	31.2	2212.8	74.1	15.151	7.828	0.753	-23.3	-59.3
118	5816	1.277	34.738	2480.	2297.	*	2386	*	478.3	28.7	2176.7	91.7	8.866	*	26.8	2186.8	83.3	13.631	7.865	0.848	-18.7	-56.8
111	5169	1.293	34.780	2485.	2297.	*	*	*	488.1	29.2	2177.7	98.8	8.857	*	27.3	2188.1	81.6	14.187	7.851	0.838	-23.8	-58.9
112	5318	1.311	34.780	2395.	2285.	*	2389	*	478.2	28.6	2165.6	98.8	8.864	*	26.7	2176.3	82.8	14.889	7.851	0.934	-25.8	-53.6
117	5476	1.335	34.781	2484.	2297.	*	2389	*	491.9	29.4	2178.1	89.5	8.854	*	27.4	2189.1	88.5	14.622	7.833	0.819	-29.2	-58.4
122	5588	1.358	34.781	2485.	2258.	*	237	*	492.2	29.4	2179.1	89.5	8.854	*	27.3	2198.3	88.4	14.774	7.831	0.817	-31.3	-71.8
324	5745	1.365	34.792	2485.	2292.	*	*	*	472.5	29.2	2171.1	92.7	8.871	*	26.2	2182.8	83.1	14.427	7.841	0.845	-31.4	-71.8

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 248 2 15 12 73 2358 3 22.3 N 177 13.3 W 5175
 248 3 16 12 73 2449 3 20.9 N 177 13.2 W
 248 4 16 12 73 2642 3 21.1 N 177 13.3 W 5317

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATH.T=INSITU								CALC PARAMETERS P.T=INSITU								
SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/100)	TALK (EO/KG)	TIT (E-6)	GC TC02 (M/KG)	TC02 (M/KG)	PC02 (ATH) (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (E-6)	DELTA CO3= (ARAG) (E-6)
325	3	27.42	35.875	2321.	1959.	* 1970	* 337.1	9.8	1693.9	256.1	8.263	* 9.8	1693.9	256.1	5.455	8.263	2.633	210.9	198.6	
320	59	27.33	35.878	2387.	1987.	* 1973	* 482.2	10.8	1748.5	227.8	8.200	* 10.8	1748.6	227.6	6.340	8.198	2.340	182.2	161.8	
333	160	24.40	35.831	2312.	2818.	*	* 398.4	11.3	1783.8	215.8	8.203	* 11.2	1784.1	214.6	6.344	8.198	2.264	168.4	147.8	
334	229	13.21	34.578	2277.	2165.	* 2165	* 701.6	27.8	2044.4	92.7	7.948	* 27.8	2044.9	92.4	11.698	7.932	8.936	45.1	24.8	
483	344	9.27	34.637	2315.	2213.	*	* 658.8	29.6	2056.7	86.6	7.956	* 29.5	2057.4	86.1	11.483	7.943	8.874	37.8	16.4	
484	443	3.45	34.634	2323.	2217.	* 2253	* 621.3	29.8	2059.6	88.6	7.977	* 28.6	2188.5	87.9	10.965	7.968	8.993	38.8	17.1	
485	541	7.52	34.587	2323.	2253.	*	* 783.1	37.4	2145.1	78.4	7.888	* 37.2	2146.1	59.7	13.821	7.859	8.787	19.8	-2.2	
486	616	6.92	34.572	2326.	2298.	* 2297	* 1882.4	48.9	2185.5	55.5	7.778	* 48.7	2186.5	34.8	17.643	7.793	8.555	4.3	-17.9	
487	698	8.17	34.551	2337.	2288.	* 2294	* 926.8	41.5	2174.2	64.4	7.855	* 41.1	2175.4	63.5	14.862	7.928	8.643	12.4	-18.8	
418	936	4.74	34.558	2363.	2383.	* 2318	* 774.3	48.9	2196.1	66.8	7.888	* 48.4	2197.8	64.8	14.362	7.843	8.656	11.5	-11.5	
411	1834	4.36	34.558	2371.	2315.	*	* 798.3	42.3	2208.4	64.3	7.871	* 41.8	2210.3	63.8	14.787	7.838	8.633	8.9	-14.5	
425	1238	3.76	34.574	2391.	2314.	* 2347	* 664.8	36.3	2203.4	74.3	7.943	* 35.8	2205.7	72.6	12.768	7.894	8.736	16.8	-7.2	
426	1353	3.35	34.598	2395.	2334.	*	* 748.9	41.1	2225.9	66.9	7.897	* 40.5	2228.4	65.1	14.357	7.943	8.568	8.2	-16.1	
428	1597	2.678	34.614	2416.	2351.	* 2351	* 788.2	48.3	2241.5	69.2	7.916	* 39.5	2244.5	67.8	14.265	7.852	8.688	7.7	-17.3	
429	1719	2.51	34.623	2417.	2349.	*	* 688.5	39.4	2239.8	78.6	7.927	* 38.6	2242.2	68.2	13.874	7.858	8.632	7.8	-17.6	
431	1964	2.28	34.648	2428.	2344.	* 2355	* 686.9	35.1	2238.5	78.4	7.978	* 34.3	2234.3	75.5	12.595	7.988	8.766	12.6	-13.6	
432	2112	2.818	34.658	2438.	2356.	*	* 658.2	37.9	2244.5	73.6	7.958	* 36.9	2248.5	78.6	13.644	7.965	8.717	6.2	-28.4	
281	2396	1.844	34.668	2432.	2375.	*	* 736.7	43.2	2265.8	65.9	7.899	* 42.1	2278.2	62.7	15.793	7.882	8.637	-4.7	-32.2	
293	2691	1.732	34.666	2435.	2334.	* 2377	* 938.3	31.3	2215.6	87.2	8.831	* 38.1	2221.8	32.9	11.986	7.924	8.842	12.3	-16.2	
285	2942	1.639	34.671	2438.	2355.	* 2352	* 636.8	37.7	2243.3	74.1	7.957	* 36.3	2248.8	69.8	14.522	7.838	8.718	-3.6	-33.8	
286	3835	1.622	34.671	2434.	2345.	*	* 575.3	34.8	2229.9	81.8	7.998	* 32.7	2235.9	75.4	13.289	7.877	8.776	1.8	-27.8	
287	3137	1.552	34.676	2446.	2337.	*	* 581.8	29.7	2215.7	91.6	8.855	* 28.5	2222.1	96.4	11.739	7.838	8.878	18.6	-19.4	
214	3835	1.427	34.686	2422.	2325.	*	* 536.8	32.8	2209.2	84.8	8.824	* 38.4	2215.3	78.8	13.493	7.878	8.881	-5.9	-38.4	
215	3938	1.409	34.689	2428.	2361.	*	* 789.7	42.4	2252.1	65.5	7.918	* 40.5	2259.5	61.2	17.387	7.749	8.622	-24.7	-57.7	
216	4327	1.371	34.691	2487.	2384.	* 2325	* 587.7	38.3	2186.2	87.5	9.042	* 28.8	2194.2	81.3	13.148	7.881	8.324	-6.3	-33.5	
219	4466	1.231	34.728	2488.	2295.	*	* 439.9	26.4	2168.4	98.1	8.899	* 24.9	2169.9	98.4	11.986	7.921	8.929	-3.2	-38.3	
220	4613	1.248	34.728	2481.	2282.	* 2388	* 458.8	27.8	2159.2	95.8	8.899	* 25.4	2168.7	87.9	12.444	7.955	8.894	-7.9	-43.5	
223	5863	1.277	34.732	2396.	2294.	*	* 471.4	28.3	2163.8	91.9	9.878	* 26.4	2174.1	83.5	13.575	7.867	8.949	-19.4	-56.8	

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
241	1	17 12 73	0800	4 33.8 N	179 8.2 E	5736
241	4	17 12 73	2249	4 32.7 N	179 89.3 E	5787
241	7	18 12 73	1000	4 32.2 N	179 8.8 E	5685

GC CO2 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TIT		CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3- (CALC)	DELTA CO3- (ARRAG)		
				TC02*(E-6)	GC*(E-6)	PCO2*(E-6)	HCO3*(E-6)	HCO3-(E-6)	CO3*(E-6)	PH	H2CO3*(E-6)	HCO3-(E-6)	CO3*(E-6)	PH	PH			ICP (E-6)	
481	3	27.10	35.123	2320.	1981.	* 1908	* 362.5	9.7	1726.5	244.8	8.238	* 9.7	1726.5	244.7	5.778	8.238	2.520	199.6	179.3
484	99	26.79	35.181	2320.	1994.	*	* 380.2	18.3	1747.6	236.1	8.220	* 18.3	1747.9	235.8	6.866	8.217	2.432	198.1	169.7
485	140	26.12	35.229	2325.	2021.	* 2020	* 421.8	11.5	1792.1	217.3	8.182	* 11.6	1792.5	216.9	6.654	8.177	2.240	178.9	150.3
487	220	16.93	34.725	2302.	2092.	* 2105	* 452.3	16.8	1923.5	182.5	8.120	* 16.8	1924.8	182.0	7.613	8.118	1.547	189.8	94.8
488	257	11.72	34.582	2308.	2283.	*	* 707.7	29.4	2884.5	99.1	7.936	* 29.3	2884.9	88.7	11.842	7.927	8.899	41.2	20.8
489	291	10.88	34.640	2317.	2237.	* 2245	* 881.2	35.1	2126.8	75.9	7.981	* 35.8	2126.5	75.5	13.488	7.978	8.767	27.6	6.3
425	419	8.48	34.611	2327.	2237.	* 2248	* 698.7	32.4	2124.1	98.5	7.931	* 32.2	2124.9	79.9	12.172	7.915	8.811	31.8	9.3
426	493	7.94	34.599	2324.	2247.	*	* 754.3	35.6	2137.6	73.8	7.897	* 35.3	2138.5	73.1	13.228	7.878	8.742	23.7	1.8
427	552	7.48	34.588	2329.	2268.	* 2276	* 848.8	40.3	2161.4	56.4	7.853	* 40.8	2162.3	65.7	14.755	7.931	8.660	15.7	-6.3
429	665	6.63	34.564	2341.	2291.	* 2284	* 892.1	44.8	2195.4	61.6	7.827	* 43.7	2188.6	68.7	15.825	7.901	8.615	9.9	-12.4
438	762	6.82	34.558	2344.	2288.	*	* 831.6	41.9	2182.8	64.1	7.853	* 41.6	2183.3	63.1	15.822	7.823	8.639	11.4	-11.2
432	932	5.88	34.543	2362.	2303.	* 2307	* 799.7	41.2	2196.3	65.6	7.873	* 40.7	2197.9	64.3	14.575	7.830	8.652	11.2	-11.9
433	1085	4.77	34.547	2300.	2388.	*	* 741.1	39.1	2192.1	68.8	7.898	* 38.6	2193.9	67.5	13.848	7.859	8.683	13.7	-9.6
434	1078	4.480	34.554	2378.	2319.	* 2325	* 789.9	42.1	2212.8	64.9	7.873	* 41.6	2213.9	63.5	14.789	7.838	8.643	9.1	-14.4
783	1255	3.824	34.572	2392.	2358.	* 2338	* 931.4	58.8	2231.6	55.6	7.885	* 58.2	2233.8	54.1	17.681	7.754	8.548	-1.9	-25.9
784	1402	3.331	34.589	2408.	2349.	*	* 797.1	42.8	2248.6	66.4	7.891	* 41.4	2243.1	64.5	14.647	7.934	8.654	7.1	-17.3
786	1698	2.625	34.617	2424.	2365.	* 2361	* 743.6	42.4	2255.9	66.7	7.897	* 41.6	2259.8	64.4	14.838	7.929	8.654	4.2	-21.1
787	1845	2.483	34.627	2425.	2381.	*	* 828.5	47.6	2273.2	68.2	7.852	* 46.7	2278.5	57.9	16.784	7.777	8.587	-3.8	-29.6
789	2145	2.852	34.648	2439.	2388.	* 2359	* 638.4	36.7	2247.1	76.2	7.964	* 35.7	2251.2	73.1	13.239	7.878	8.742	8.4	-18.3
710	2295	1.927	34.653	2440.	2378.	*	* 671.6	39.3	2258.7	72.8	7.938	* 38.2	2263.1	68.7	14.268	7.846	8.698	2.5	-24.7
713	2646	1.792	34.662	2441.	2365.	* 2363	* 639.5	37.6	2252.5	74.9	7.957	* 36.4	2257.6	71.0	14.895	7.851	8.722	1.8	-27.4
714	2794	1.736	34.665	2446.	2361.	*	* 598.7	35.3	2246.4	79.3	7.985	* 34.8	2251.8	75.1	13.488	7.873	8.763	3.4	-25.5
716	3053	1.621	34.671	2430.	2368.	* 2347	* 663.7	39.3	2256.8	71.9	7.941	* 37.8	2262.6	67.5	15.273	7.816	8.687	-7.7	-37.5
717	3240	1.573	34.673	2437.	2344.	*	* 558.7	33.1	2227.9	93.1	8.818	* 31.8	2234.2	78.0	13.167	7.981	8.793	1.8	-29.4
719	3538	1.583	34.679	2434.	2349.	* 2338	* 589.5	35.8	2235.8	79.8	7.988	* 33.5	2241.8	73.7	14.272	7.846	8.749	-7.1	-38.5
720	3687	1.465	34.682	2432.	2331.	*	* 523.7	31.2	2212.9	87.8	8.035	* 29.7	2228.2	81.1	12.959	7.887	8.824	-1.6	-33.6
181	3838	1.417	34.685	2429.	2337.	* 2332	* 557.1	33.2	2221.4	82.4	8.089	* 31.6	2228.9	76.4	13.957	7.855	8.777	-8.2	-40.8
182	3938	1.373	34.688	2427.	2327.	* 2335	* 524.7	31.3	2209.2	98.4	8.833	* 29.8	2217.1	88.1	13.333	7.875	8.815	-5.9	-38.9
183	4037	1.340	34.690	2425.	2322.	* 2333	* 512.3	38.6	2283.5	87.9	8.842	* 29.8	2211.6	91.4	13.172	7.980	8.828	-6.8	-39.4
185	4225	1.267	34.695	2418.	2315.	* 2312	* 588.9	38.5	2196.8	87.7	8.843	* 28.9	2285.2	80.9	13.372	7.874	8.823	-9.2	-43.3
186	4384	1.241	34.698	2417.	2316.	*	* 515.4	38.9	2198.4	86.7	8.838	* 29.2	2287.1	79.7	13.746	7.862	8.818	-12.8	-47.5
187	4533	1.238	34.698	2401.	2320.	*	* 591.1	35.5	2288.2	76.3	7.980	* 33.6	2216.8	69.6	15.979	7.790	8.788	-25.0	-68.3
189	4838	1.253	34.708	2402.	2385.	*	* 526.2	31.6	2199.2	94.3	8.827	* 29.7	2198.6	76.7	14.781	7.833	8.788	-22.5	-59.8
118	4988	1.287	34.709	2404.	2291.	* 2300	* 478.6	28.2	2178.1	92.7	8.872	* 26.4	2188.3	84.4	13.485	7.873	8.858	-17.2	-54.3
112	5279	1.299	34.708	2404.	2291.	*	* 471.8	28.2	2178.1	92.7	8.871	* 26.3	2188.9	83.8	13.789	7.868	8.933	-22.5	-60.9
114	5427	1.317	34.701	2403.	2292.	* 2295	* 477.2	28.6	2171.9	91.5	8.260	* 26.6	2182.9	92.5	14.155	7.849	8.939	-26.4	-65.4
123	5710	1.354	34.781	2404.	2389.	* 2294	* 536.2	32.8	2193.7	83.3	8.828	* 29.8	2284.8	74.4	16.213	7.798	8.757	-39.4	-79.7

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 244 1 28 12 73 1188 1 1.5 N 178 55.8 E 5787
 244 2 28 12 73 1424 1 1.5 N 178 56.8 E 5642
 244 3 29 12 73 1687 1 1.5 N 178 52.8 E 5375

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/80)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM.T=INSITU					CALC PARAMETERS P,T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (M/KG)			
				TALK (EQ/KG)	TC02* (M/KG)	GC (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)			PH	PH	(CP)
382	63	25.809	35.117	2331.	2819.	* 2085	* 482.2	11.2	1785.8	222.8	8.199	* 11.2	1785.2	222.7	6.356	8.197	2.292	177.1	156.7
385	195	18.673	34.975	2328.	2878.	* 2078.	* 486.9	13.7	1886.6	177.7	8.174	* 13.6	1887.8	177.3	6.887	8.167	1.818	138.6	189.7
387	242	14.332	34.929	2329.	2133.	* 2148	* 449.9	17.2	1972.9	142.9	8.123	* 17.1	1973.4	142.4	7.676	8.115	1.458	95.2	74.1
389	374	10.166	34.737	2338.	2238.	* 2238	* 743.1	32.5	2123.3	82.2	7.914	* 32.3	2124.8	81.7	12.682	7.908	8.832	33.2	11.7
318	485	8.815	34.632	2337.	2263.	* 2264	* 886.6	36.9	2153.1	73.8	7.876	* 36.7	2153.9	72.4	13.874	7.858	8.735	23.8	1.2
312	688	5.694	34.541	2356.	2288.	* 2277	* 787.4	36.1	2178.5	73.5	7.919	* 35.8	2171.7	72.5	12.886	7.893	8.734	21.4	-1.8
316	1299	3.519	34.582	2408.	2337.	* 2332	* 736.1	40.6	2228.4	68.8	7.981	* 40.8	2238.8	66.2	14.141	7.858	8.572	9.8	-14.3
319	1828	2.583	34.623	2435.	2354.	* 2342	* 638.2	36.1	2248.7	77.2	7.966	* 35.3	2244.3	74.5	12.794	7.893	8.756	13.1	-12.6
322	2293	1.958	34.633	2442.	2363.	* 2363	* 629.7	36.8	2249.9	76.3	7.965	* 35.7	2254.3	72.9	13.484	7.873	8.741	5.7	-28.5
183	2943	1.671	34.567	2452.	2356.	* 2356	* 553.1	32.7	2239.4	84.9	8.817	* 31.4	2244.3	88.3	12.597	7.888	8.816	6.8	-22.5
184	3141	1.598	34.673	2451.	2357.	* 2362	* 559.6	33.1	2239.9	83.9	8.812	* 31.8	2246.2	79.8	12.991	7.886	8.883	3.2	-26.8
187	3639	1.479	34.682	2446.	2348.	* 2351	* 539.7	32.1	2238.1	85.8	8.825	* 38.6	2237.4	88.8	13.195	7.888	8.813	-2.8	-33.8
189	3936	1.482	34.689	2445.	2339.	* 2339	* 589.2	38.4	2218.6	98.8	8.848	* 28.8	2226.6	83.6	12.862	7.891	8.858	-2.4	-35.4
112	4386	1.283	34.698	2427.	2322.	* 2322	* 584.7	38.2	2282.8	89.8	8.848	* 28.5	2211.6	81.8	13.415	7.872	8.832	-18.6	-45.3
115	4536	1.296	34.788	2417.	2322.	* 2318	* 538.1	32.3	2286.2	83.5	8.821	* 38.5	2215.1	76.5	14.517	7.838	8.778	-18.2	-53.5
118	4985	1.267	34.782	2486.	2297.	* 2385	* 484.5	29.1	2177.4	98.6	8.868	* 27.2	2187.4	82.4	13.773	7.861	8.838	-19.2	-56.3
120	5283	1.288	34.784	2416.	2381.	* 2381	* 468.1	28.1	2178.9	94.1	8.875	* 26.1	2189.7	85.2	13.648	7.865	8.866	-21.3	-59.7
123	5531	1.319	34.783	2413.	2294.	* 2294	* 454.8	27.2	2178.7	96.1	8.887	* 25.3	2182.1	86.6	13.683	7.866	8.881	-24.8	-63.5
124	5679	1.338	34.783	2415.	2382.	* 2382	* 475.8	28.4	2188.7	92.9	8.878	* 26.3	2192.2	83.4	14.359	7.843	8.849	-29.8	-69.9

CARBONATE REPORT

GEOSSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
246	2	21 12 73	1823	8 8.1 S	178 59.8 E	5418
246	3	21 12 73	1833	8 1.5 S	178 54.4 E	5416
246	5	22 12 73	0823	8 8.9 S	178 53.8 E	5484

GC CO2 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (EQ/KG)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATM, T=INSITU				CALC PARAMETERS P, T=INSITU						
					TIT (E-6)	GC (E-6)	TC02 (UM/KG)	TC03 (UM/KG)	PCO2 (ATM)	H2CO3 (UM/KG)	HCO3- (UM/KG)	CO3= (UM/KG)	PH	H2CO3 (UM/KG)	HCO3- (UM/KG)	CO3= (UM/KG)	PH	ICP (E-6)	DELTA CO3= (E-6)
502	18	25.862	35.198	2340.	1993.	* 2814	* 349.2	9.7	1748.6	244.7	8.249	* 9.7	1748.6	244.7	5.634	8.249	2.525	199.4	179.1
504	35	25.882	35.208	2339.	2028.	* 2820	* 392.4	10.9	1781.6	227.5	8.289	* 10.9	1781.7	227.4	6.283	8.287	2.346	182.8	161.6
506	54	25.768	35.299	2342.	2816.	* 2818	* 388.7	10.6	1773.2	232.2	8.219	* 10.6	1773.3	232.1	6.858	8.218	2.396	186.6	166.2
508	84	25.735	35.233	2346.	2824.	* 2822	* 389.2	10.8	1793.4	229.7	8.212	* 10.8	1793.6	229.6	6.176	8.209	2.371	183.9	163.4
510	138	25.191	35.406	2351.	2849.	* 2848	* 422.2	11.9	1828.8	216.3	8.182	* 11.9	1821.1	216.8	6.644	8.178	2.242	178.1	149.5
511	158	24.337	35.482	2357.	2361.	* 2858	* 422.6	12.2	1836.7	212.1	8.188	* 12.1	1837.1	211.8	6.689	8.175	2.282	165.7	145.8
514	204	18.347	35.317	2351.	2181.	* 2181	* 489.8	13.9	1988.8	179.2	9.173	* 13.8	1988.5	178.7	6.915	9.167	1.358	132.8	111.1
516	242	15.139	35.113	2333.	2117.	* 2123	* 419.3	15.6	1945.8	155.6	8.152	* 15.6	1946.3	155.1	7.188	8.144	1.596	187.9	86.8
517	288	12.639	34.893	2329.	2162.	* 2156	* 497.4	28.1	2017.3	124.8	8.888	* 28.0	2017.9	124.1	9.521	8.878	1.278	76.5	55.3
519	344	10.642	34.769	2329.	2227.	* 2229	* 783.3	38.3	2189.3	87.4	7.937	* 38.1	2118.8	86.9	11.983	7.924	8.086	38.7	17.3
520	482	9.444	34.788	2322.	2242.	* 2242	* 784.7	35.1	2131.1	75.8	7.887	* 35.8	2131.8	75.3	13.426	7.972	8.765	26.5	5.8
521	462	8.193	34.629	2335.	2255.	* 2245	* 749.8	35.8	2144.4	75.6	7.983	* 34.8	2145.2	74.9	13.828	7.885	8.761	25.7	4.8
522	523	7.293	34.579	2342.	2278.	* 2278	* 771.8	37.2	2161.1	71.7	7.889	* 37.8	2162.8	71.8	13.541	7.968	8.728	21.2	-8.7
524	651	5.916	34.543	2361.	2294.	* 2294	* 766.9	38.8	2185.8	69.4	7.989	* 38.5	2186.9	68.6	13.785	7.963	8.694	17.7	-4.6
382	656	5.91	34.542	2353.	2287.	* 2288	* 769.1	38.9	2179.3	68.8	7.886	* 38.6	2198.5	67.9	13.792	7.968	8.687	17.8	-5.3
383	729	5.68	34.542	2362.	2299.	* 2288	* 781.6	40.8	2191.5	67.5	7.888	* 39.7	2192.8	66.6	14.891	7.851	8.674	15.1	-7.4
385	949	4.674	34.546	2378.	2313.	* 2313	* 749.1	39.6	2284.7	58.7	7.896	* 39.2	2286.4	67.4	13.864	7.858	8.682	14.8	-9.1
387	1193	3.71	34.575	2481.	2341.	* 2341	* 759.8	41.6	2232.7	66.7	7.898	* 41.8	2234.9	65.1	14.381	7.842	8.668	9.6	-14.2
388	1341	3.296	34.586	2488.	2341.	* 2341	* 718.6	39.5	2231.5	78.8	7.916	* 38.9	2234.8	68.1	13.724	7.863	8.691	11.3	-13.8
318	1633	2.71	34.616	2438.	2363.	* 2363	* 783.6	40.8	2232.6	78.5	7.921	* 39.2	2255.6	68.2	13.946	7.856	8.692	8.6	-16.6
325	2879	2.189	34.646	2441.	2359.	* 2359	* 618.5	35.9	2245.3	77.7	7.972	* 35.8	2249.4	74.6	12.985	7.889	8.758	18.6	-15.9
327	2375	1.918	34.656	2451.	2378.	* 2363	* 621.8	36.4	2256.1	77.5	7.971	* 35.3	2288.7	73.9	13.318	7.876	8.751	6.8	-20.6
328	2523	1.84	34.668	2458.	2365.	* 2365	* 682.9	35.4	2258.1	79.5	7.983	* 34.3	2255.1	75.7	13.124	7.882	8.769	7.8	-21.8
333	3262	1.588	34.675	2449.	2358.	* 2358	* 578.9	33.8	2241.8	82.4	8.084	* 32.4	2248.3	77.3	13.488	7.873	8.788	8.8	-38.4
281	3442	1.516	34.677	2442.	2355.	* 2352	* 584.3	34.7	2248.8	88.2	7.993	* 33.2	2246.8	75.8	13.979	7.855	8.762	-4.5	-35.6
284	3984	1.438	34.685	2433.	2333.	* 2333	* 527.6	31.5	2215.8	86.6	8.832	* 29.9	2222.9	88.4	13.293	7.876	8.817	-4.9	-37.7
287	4337	1.269	34.698	2415.	2312.	* 2313	* 588.2	38.5	2193.9	87.7	8.843	* 28.8	2292.5	88.7	13.511	7.869	8.821	-11.8	-45.5
288	4484	1.272	34.697	2414.	2382.	* 2382	* 476.3	28.6	2181.1	92.3	8.869	* 26.9	2198.3	84.8	12.893	7.998	8.863	-9.8	-44.1
289	4631	1.258	34.792	2414.	2383.	* 2383	* 479.6	28.8	2182.4	91.8	8.866	* 27.8	2191.8	84.1	13.168	7.881	8.856	-11.9	-47.6
218	4775	1.245	34.782	2416.	2317.	* 2317	* 522.6	31.4	2288.8	85.6	8.832	* 29.5	2289.5	78.8	14.458	7.848	8.794	-28.3	-56.5
212	5871	1.256	34.783	2482.	2296.	* 2296	* 492.9	29.6	2177.6	88.8	8.853	* 27.7	2187.7	88.6	14.136	7.858	8.828	-22.4	-59.9
217	5266	1.288	34.785	2486.	2296.	* 2294	* 481.2	28.9	2176.1	91.1	8.863	* 26.9	2186.7	82.4	14.843	7.853	8.838	-23.8	-62.1

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 248 1 22 12 73 1628 1 2.8 S 179 2.8 E 5445
 248 2 22 12 73 1858 1 2.8 S 179 2.8 E 5431
 248 3 22 12 73 2854 1 8.1 S 178 58.8 E 5429

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**TC02-15 (UM/KG)

MEASURED PARAMETERS				*CALC PARAMETERS P=1ATH,T=INSITU*							CALC PARAMETERS P.T=INSITU					DELTA	DELTA					
SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (EQ/KG)	TIT (M/KG)	GC TC02 (M/KG)	GC TC02 (E-6)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH (E-9)	PH	ICP (E-6)	CO3= (M/KG)	CO3= (M/KG)	CO3= (M/KG)	CO3= (M/KG)
301	25	25.286	35.391	2352.	2023.	*	*	385.9	18.5	1777.9	234.4	8.216	18.6	1778.8	234.4	5.289	8.215	2.432	189.1	168.7		
303	146	25.512	35.558	2366.	2044.	*	*	395.8	11.1	1883.1	229.8	8.287	11.8	1883.5	229.5	6.273	8.283	2.391	183.5	162.9		
304	171	23.460	35.818	2386.	2076.	*	*	394.7	11.5	1843.1	221.3	8.284	11.6	1843.5	220.9	6.328	9.199	2.319	174.7	154.1		
306	252	14.832	35.185	2345.	2133.	*	*	412.4	15.9	1964.3	152.8	8.157	15.8	1964.9	152.3	7.188	9.148	1.567	184.9	93.8		
307	292	11.665	34.861	2319.	2176.	*	*	551.5	22.9	2843.1	118.8	8.035	22.8	2843.7	189.5	9.463	8.824	1.119	61.7	48.4		
308	379	9.746	34.716	2298.	2227.	*	*	939.3	37.2	2119.8	71.8	7.857	37.8	2119.5	78.5	14.368	7.843	8.718	22.8	8.5		
309	481	9.674	34.691	2338.	2227.	*	*	637.8	29.3	2186.6	92.1	7.974	28.2	2187.4	91.4	18.983	7.959	8.938	42.8	21.2		
318	585	7.785	34.689	2337.	2268.	*	*	883.3	38.1	2159.6	78.3	7.874	37.8	2168.5	69.6	13.991	7.854	8.796	28.8	-1.8		
311	584	6.588	34.561	2345.	2279.	*	*	797.1	38.9	2171.3	68.8	7.878	38.6	2172.4	68.8	13.978	7.855	8.689	17.6	-4.6		
312	728	5.514	34.539	2365.	2278.	*	*	549.9	33.4	2165.6	79.8	7.954	33.8	2167.8	78.8	11.859	7.926	8.789	26.5	4.8		
313	852	5.822	34.547	2368.	2296.	*	*	757.9	39.6	2188.6	67.8	7.889	39.2	2198.1	66.7	13.943	7.856	8.675	14.2	-8.7		
314	975	4.441	34.555	2377.	2327.	*	*	833.6	44.5	2228.7	61.9	7.851	44.8	2222.4	68.6	15.415	7.812	8.614	7.1	-16.1		
316	1278	3.695	34.572	2406.	2324.	*	*	643.6	35.3	2211.6	77.1	7.957	34.7	2214.8	75.3	12.381	7.987	8.763	19.1	-4.9		
321	2894	2.898	34.643	2448.	2346.	*	*	566.2	32.9	2229.4	83.7	8.888	32.8	2233.5	88.5	11.986	7.924	8.817	16.3	-18.3		
323	2342	1.943	34.653	2448.	2368.	*	*	626.7	36.6	2254.4	77.8	7.968	33.6	2258.9	73.5	13.379	7.874	8.747	6.7	-28.6		
324	2517	1.958	34.668	2454.	2358.	*	*	527.3	38.9	2229.9	89.2	8.837	29.9	2235.8	95.1	11.351	7.937	8.865	16.5	-11.4		
184	2988	1.689	34.566	2451.	2358.	*	*	534.6	31.6	2238.9	87.6	8.831	38.4	2236.7	82.9	12.158	7.915	8.943	18.8	-19.2		
186	3188	1.614	34.671	2453.	2334.	*	*	478.8	27.9	2289.8	97.1	8.881	26.7	2215.5	91.8	11.882	7.959	8.933	16.5	-13.4		
187	3249	1.598	34.673	2458.	2344.	*	*	513.4	38.4	2223.5	98.1	8.846	29.1	2238.1	84.8	12.189	7.917	8.962	7.7	-22.9		
189	3547	1.527	34.688	2447.	2365.	*	*	587.6	36.1	2251.1	77.8	7.978	34.5	2237.9	72.5	14.617	7.835	8.737	-8.3	-39.8		
117	4419	1.275	34.698	2428.	2294.	*	*	414.8	24.8	2164.5	184.6	8.126	23.3	2174.8	96.6	11.186	7.951	8.983	3.7	-31.1		
128	4842	1.247	34.782	2415.	2288.	*	*	429.9	25.8	2161.7	188.4	8.189	24.1	2172.8	91.9	12.112	7.917	8.935	-7.4	-44.8		
123	5293	1.293	34.783	2487.	2387.	*	*	516.7	31.8	2198.1	85.9	8.835	28.9	2288.6	77.5	15.852	7.822	8.788	-29.2	-67.6		

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 251 4 24 12 73 1928 4 34.8 S 179 57.8 E 5375
 251 6 25 12 73 9538 4 34.8 S 179 53.8 E 5388

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/80)	MEASURED PARAMETERS			*CALC PARAMETERS P=1ATH,T=INSITU*					CALC PARAMETERS P,T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (M/KG)		
				TALK (E-6)	TIT (E-6)	GC TC02* (M/KG)	PCO2 (E-5)	H2CO3 (E-5)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	AH (E-9)	PH			ICP (E-6)	
681	4	27.717	35.646	2368.	2882.	*	366.1	9.7	1738.3	254.8	8.239	*	9.7	1738.3	254.8	5.767	8.239	2.634	288.9	188.6
683	103	27.635	35.661	2364.	1991.	*	342.8	9.1	1717.8	264.1	8.262	*	9.1	1718.1	263.8	5.511	8.259	2.758	218.2	197.8
685	161	26.312	35.680	2362.	2812.	*	359.8	9.8	1753.8	248.4	8.243	*	9.8	1754.2	248.8	5.788	8.237	2.588	282.8	181.4
686	193	24.848	35.355	2389.	2883.	*	414.7	12.8	1852.1	218.9	8.188	*	12.8	1852.6	218.4	6.575	8.182	2.382	172.2	151.5
687	222	28.612	35.881	2388.	2892.	*	386.2	12.3	1874.6	285.1	8.283	*	12.2	1875.2	284.6	6.368	9.196	2.147	157.9	137.1
689	274	13.135	35.826	2334.	2167.	*	511.7	28.3	2821.7	125.8	8.871	*	28.2	2822.3	124.5	8.698	8.861	1.278	75.9	55.7
610	389	18.648	34.818	2333.	2286.	*	593.8	25.5	2879.5	181.8	8.885	*	25.4	2880.1	180.5	18.149	7.994	1.825	52.5	31.2
611	361	9.359	34.719	2333.	2213.	*	594.3	26.5	2889.7	96.8	8.888	*	26.4	2890.4	96.2	18.312	7.987	8.979	47.8	26.3
612	426	8.553	34.653	2329.	2284.	*	548.7	25.3	2879.7	99.8	8.827	*	25.2	2880.5	98.3	9.747	8.811	8.999	49.4	27.7
613	586	7.823	34.688	2325.	2237.	*	691.9	32.7	2125.8	79.2	7.932	*	32.5	2126.8	78.5	12.236	7.912	8.796	28.9	7.8
614	689	7.891	34.569	2337.	2248.	*	633.8	38.7	2125.4	83.9	7.966	*	38.5	2126.5	83.8	11.396	7.943	8.841	32.6	18.5
615	784	6.388	34.541	2342.	2252.	*	647.2	32.3	2139.5	88.2	7.955	*	32.8	2148.8	79.2	11.881	7.929	8.882	27.9	5.5
617	984	4.976	34.525	2364.	2284.	*	678.1	35.1	2173.5	75.4	7.948	*	34.7	2175.2	74.1	12.469	7.984	8.758	21.2	-1.8
618	1052	4.317	34.545	2377.	2387.	*	789.8	38.8	2198.2	78.8	7.916	*	37.6	2200.1	69.4	13.362	7.874	8.782	15.1	-8.3
621	1497	2.841	34.599	2486.	2332.	*	662.1	37.4	2221.4	73.2	7.942	*	36.8	2224.2	71.1	13.186	7.883	8.721	12.7	-12.8
623	1794	2.374	34.638	2425.	2328.	*	555.7	32.8	2211.8	85.8	8.814	*	31.2	2214.6	82.2	11.412	7.943	8.834	21.8	-4.6
481	1944	2.155	34.639	2429.	2355.	* 2348	654.3	37.9	2243.5	73.6	7.948	*	37.8	2247.2	78.8	13.489	7.978	8.719	8.2	-17.9
482	2888	2.879	34.645	2435.	2356.	*	629.6	36.6	2243.2	76.1	7.964	*	35.7	2247.3	73.1	13.169	7.888	8.742	8.9	-17.6
483	2338	1.912	34.653	2435.	2344.	*	572.9	33.5	2228.5	82.8	8.881	*	32.5	2233.8	78.4	12.358	7.988	8.797	11.8	-15.5
485	2531	1.798	34.662	2438.	2332.	*	514.1	38.2	2211.9	89.9	8.844	*	29.2	2217.1	85.7	11.376	7.944	8.871	16.9	-11.8
486	2681	1.729	34.669	2439.	2346.	*	563.8	33.2	2229.6	83.2	8.888	*	32.8	2234.9	79.8	12.568	7.981	8.883	8.5	-19.9
487	2833	1.655	34.672	2437.	2338.	* 2358	587.5	38.8	2289.7	98.3	8.849	*	28.9	2215.4	85.7	11.581	7.936	8.871	13.5	-15.5
411	3438	1.488	34.682	2438.	2328.	*	493.6	29.4	2286.8	91.8	8.859	*	28.8	2213.9	86.1	11.947	7.923	8.876	6.7	-24.4
416	3888	1.484	34.698	2433.	2313.	*	459.9	27.4	2188.4	97.2	8.887	*	25.9	2196.6	98.5	11.567	7.933	8.928	5.2	-27.5
417	4823	1.371	34.591	2437.	2319.	* 2296	465.6	27.9	2195.8	96.2	9.882	*	26.3	2283.4	89.3	11.975	7.922	8.988	2.8	-31.3
428	4474	1.235	34.788	2418.	2296.	*	468.8	28.1	2174.6	93.3	9.075	*	26.5	2183.8	85.8	12.698	7.996	8.872	-8.8	-43.8
421	4624	1.233	34.793	2481.	2273.	* 2297	422.9	25.4	2147.8	188.6	8.113	*	23.8	2156.7	92.5	11.761	7.938	8.941	-3.5	-39.2
424	5351	1.285	34.785	2485.	2283.	*	442.7	26.5	2159.8	97.5	8.896	*	24.7	2170.1	98.2	13.894	7.883	8.898	-19.4	-58.1

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 252 1 26 12 73 26 9 29.1 S 178 5.8 W 5367
 252 2 26 12 73 2152 9 29.1 S 178 5.9 W 5353

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (B/100)	TALK (EO/KG)	MEASURED PARAMETERS				CALC PARAMETERS P=1 ATM. T=INSITU							DELTA CO3= (CALC)	DELTA CO3= (ARAG)		
					TIT (M/KG)	GC (M/KG)	TC02 (M/KG)	PC02 (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)			AH (E-9)	PH
201	1	29.37	34.486	2285.	1997.	* 1908	* 296.2	7.7	1615.3	374.8	8.308	* 7.7	1615.3	274.8	4.922	0.308	2.778	229.9	208.6
202	27	28.63	34.518	2279.	1884.	*	* 287.4	7.5	1598.8	277.7	8.317	* 7.5	1598.9	277.6	4.831	0.316	2.889	232.4	212.8
203	51	28.66	34.549	2286.	1903.	* 1985	* 386.2	8.0	1625.1	269.9	8.296	* 8.0	1625.2	269.8	5.071	0.295	2.732	224.4	204.8
204	51	29.75	34.981	2314.	1927.	* 1927	* 313.5	8.1	1645.8	273.1	8.291	* 8.1	1646.8	272.9	5.135	0.299	2.792	227.5	207.1
206	185	27.23	35.641	2378.	2034.	* 2029	* 488.8	10.7	1783.6	239.7	8.289	* 10.7	1783.9	239.4	6.232	0.285	2.581	193.7	173.3
207	169	24.68	36.896	2389.	2063.	* 2062	* 389.5	11.1	1819.8	232.1	8.212	* 11.1	1820.3	231.7	6.221	0.286	2.451	185.6	165.8
208	243	17.87	35.471	2358.	2119.	*	* 428.5	14.7	1932.8	171.9	8.153	* 14.7	1932.9	171.4	7.126	0.147	1.782	124.4	183.5
209	317	13.42	34.992	2327.	2152.	* 2157	* 498.3	19.3	2083.8	129.7	8.087	* 19.2	2083.7	129.1	8.399	0.276	1.324	81.3	68.8
218	416	9.37	34.694	2322.	2289.	* 2283	* 614.8	27.6	2088.8	82.5	7.985	* 27.4	2089.6	81.9	18.736	7.969	0.935	43.1	21.5
211	515	7.77	34.688	2323.	2227.	*	* 649.6	38.8	2113.8	83.2	7.956	* 38.6	2114.8	82.4	11.569	7.937	0.936	32.9	18.9
214	613	6.88	34.557	2341.	2219.	* 2224	* 525.7	25.7	2096.3	97.8	8.048	* 25.5	2097.5	96.8	9.625	8.817	0.973	45.6	23.4
225	687	6.33	34.538	2329.	2232.	* 2227	* 618.5	38.4	2118.1	83.4	7.976	* 38.2	2119.4	82.4	11.222	7.958	0.834	31.3	9.8
226	761	5.85	34.527	2339.	2243.	*	* 687.8	38.8	2129.2	83.1	7.979	* 38.5	2130.6	81.9	11.245	7.949	0.829	38.2	7.6
227	835	5.37	34.523	2348.	2243.	*	* 568.9	28.9	2126.3	87.8	8.818	* 28.6	2127.9	86.5	10.937	7.977	0.875	34.2	11.4
228	989	5.87	34.522	2353.	2271.	*	* 658.2	34.3	2168.5	76.2	7.945	* 33.9	2162.2	74.9	12.311	7.918	0.758	21.9	-1.1
238	1862	4.23	34.526	2365.	2288.	* 2268	* 627.8	33.7	2168.6	77.7	7.963	* 33.2	2170.6	76.1	12.881	7.921	0.771	21.6	-1.8
231	1238	3.668	34.549	2376.	2298.	*	* 613.5	33.7	2177.9	78.4	7.972	* 33.1	2188.3	76.6	11.942	7.923	0.776	28.8	-3.2
232	1378	3.264	34.571	2387.	2286.	* 2385	* 544.8	38.3	2169.5	96.2	8.819	* 29.8	2172.2	84.8	18.848	7.965	0.851	25.8	2.5
233	1527	2.88	34.591	2399.	2382.	*	* 556.6	31.4	2186.3	84.3	8.811	* 38.8	2189.2	81.9	11.283	7.951	0.831	23.4	-1.4
181	1626	2.598	34.682	2397.	2327.	* 2332	* 675.5	38.4	2217.5	71.1	7.932	* 37.7	2228.5	68.8	13.589	7.867	0.698	9.3	-15.8
234	1673	2.58	34.687	2403.	2312.	*	* 576.8	32.9	2197.7	81.4	7.996	* 32.2	2208.9	78.8	11.758	7.938	0.888	18.9	-6.4
182	1799	2.381	34.628	2488.	2326.	*	* 613.5	35.3	2213.7	77.8	7.971	* 34.5	2217.1	74.4	12.685	7.899	0.755	13.1	-12.5
183	1973	2.195	34.633	2489.	2322.	* 2339	* 587.6	34.8	2288.5	79.5	7.988	* 33.2	2212.3	76.5	12.324	7.989	0.777	13.5	-12.6
185	2325	1.939	34.653	2431.	2339.	* 2345	* 568.2	33.2	2223.3	82.4	8.884	* 32.2	2227.9	78.9	12.266	7.911	0.881	12.3	-15.8
188	2851	1.679	34.678	2426.	2313.	*	* 484.8	28.6	2191.2	93.3	8.866	* 27.5	2197.8	88.5	11.146	7.953	0.899	16.1	-12.9
189	3825	1.527	34.673	2431.	2326.	* 2358	* 512.5	38.3	2296.5	99.2	9.844	* 29.1	2212.6	94.2	11.928	7.923	0.856	9.8	-19.8
118	3199	1.575	34.676	2431.	2327.	*	* 515.2	38.5	2287.8	98.6	9.842	* 29.3	2214.3	83.5	12.188	7.914	0.848	6.9	-23.3
116	3897	1.386	34.694	2413.	2317.	*	* 536.8	32.8	2281.8	84.8	8.822	* 38.4	2288.7	77.9	13.627	7.866	0.793	-7.6	-48.4
117	4895	1.328	34.788	2399.	2292.	* 2389	* 498.8	29.3	2173.4	89.3	8.855	* 27.8	2181.6	82.6	12.841	7.991	0.841	-5.6	-39.2
119	4468	1.247	34.784	2393.	2272.	* 2282	* 441.6	26.5	2148.9	96.6	8.895	* 24.9	2158.1	89.8	12.896	7.917	0.985	-4.6	-39.6
120	4643	1.247	34.785	2381.	2278.	*	* 497.3	29.8	2161.4	86.3	9.846	* 28.1	2178.6	79.3	13.828	7.899	0.887	-16.9	-52.7
121	4892	1.245	34.794	2393.	2283.	* 2381	* 476.7	28.6	2163.6	98.9	8.865	* 26.8	2173.5	82.7	13.525	7.969	0.841	-17.4	-54.2
123	5241	1.268	34.786	2393.	2278.	* 2294	* 435.9	26.1	2146.2	97.7	9.188	* 24.3	2157.8	88.6	12.842	7.891	0.982	-17.1	-53.4
124	5351	1.272	34.784	2391.	2275.	* 2293	* 457.8	27.4	2153.7	93.9	8.881	* 25.5	2164.6	84.9	13.578	7.867	0.863	-22.7	-61.4

CARBONATE REPORT

GEOSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
257	1	5 1 74	1936	18 18.5 S	169 59.6 W	5179
257	4	5 1 74	19321	18 18.8 S	170 8.8 W	5138
257	6	6 1 74	1837	18 7.2 S	169 59.8 W	5156

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS		CALC PARAMETERS P=1ATH, T=INSITU*								CALC PARAMETERS P.T=INSITU		DELTA CO3=	DELTA CO3=			
			SAL. (8/100)	TALK (EQ/KG)	TIT TC02* (M/KG)	GC TC02* (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	(CP)	(CALC)	(ARRG)
627	6	28.33	34.771	2311.	1987.	* 1547	* 284.2	7.4	1615.8	284.6	8.323	* 7.4	1615.8	284.5	4.752	8.323	2.908	235.4	219.1
628	11	28.38	34.768	2297.	1918.	* 1938	* 302.8	7.9	1629.5	272.6	8.381	* 7.9	1629.5	272.6	5.888	8.388	2.778	227.4	287.1
629	51	28.81	35.418	2345.	1947.	* 1971	* 303.9	8.8	1658.4	288.6	8.382	* 8.8	1658.6	288.5	5.886	8.387	2.911	235.1	214.7
538	181	27.46	35.725	2378.	2811.	* 2817	* 385.8	9.7	1746.4	254.8	8.241	* 9.7	1746.7	254.6	5.789	8.237	2.657	285.8	188.5
531	151	25.38	38.164	2395.	2855.	* 2878	* 378.7	18.6	1882.7	241.7	9.224	* 18.6	1883.1	241.3	6.838	8.219	2.558	195.4	174.9
632	188	23.84	36.151	2393.	2878.	* 2895	* 383.3	11.1	1829.3	229.5	8.215	* 11.1	1829.8	229.1	6.173	8.289	2.431	183.8	162.3
633	288	22.81	38.122	2352.	2888.	* 2185	* 385.2	11.5	1846.6	221.9	8.211	* 11.5	1847.1	221.4	6.247	8.284	2.344	175.8	154.4
534	258	28.75	35.857	2375.	2894.	* 2114	* 481.1	12.7	1889.9	288.5	8.189	* 12.6	1881.5	199.9	6.594	8.181	2.181	153.1	132.2
482	251	28.15	35.853	2375.	2898.	* 2115	* 395.3	12.8	1887.5	197.7	8.189	* 12.8	1888.1	197.1	6.599	8.181	2.872	158.2	129.4
483	381	16.32	35.352	2343.	2133.	* *	* 462.4	16.6	1963.7	152.8	8.128	* 16.5	1984.4	152.8	7.765	8.118	1.576	184.5	83.4
484	376	12.85	34.879	2328.	2182.	* 2283	* 581.1	23.8	2858.8	187.4	8.816	* 23.7	2851.5	186.8	9.946	8.882	1.892	58.5	37.8
485	451	5.12	34.654	2314.	2198.	* *	* 591.6	26.8	2877.3	93.9	7.997	* 26.6	2878.2	93.2	18.465	7.988	8.947	44.1	22.4
486	681	6.38	34.538	2325.	2225.	* *	* 598.2	29.7	2118.4	84.9	7.985	* 29.5	2111.6	84.8	18.918	7.962	8.858	33.6	11.4
487	751	5.31	34.513	2342.	2257.	* 2278	* 645.2	33.4	2146.2	77.4	7.952	* 33.8	2147.6	76.3	11.936	7.923	8.772	24.6	2.1
488	988	4.63	34.517	2358.	2278.	* *	* 655.9	34.8	2168.2	75.8	7.944	* 34.4	2161.9	73.7	12.332	7.989	8.746	28.8	-2.2
489	1848	4.87	34.535	2364.	2288.	* *	* 627.9	33.9	2168.9	77.2	7.962	* 33.5	2178.8	75.7	11.998	7.921	8.766	21.5	-1.9
418	1164	3.67	34.551	2372.	2285.	* 2337	* 687.5	33.3	2172.9	78.8	7.975	* 32.8	2175.1	77.1	11.788	7.929	8.781	21.8	-1.9
411	1263	3.38	34.565	2373.	2293.	* *	* 633.8	35.1	2182.5	75.3	7.957	* 34.6	2184.9	73.5	12.481	7.987	8.745	17.4	-6.7
414	1596	2.74	34.559	2408.	2318.	* *	* 619.8	35.1	2286.8	76.9	7.988	* 34.4	2289.8	74.5	12.463	7.984	8.756	15.3	-9.7
415	1759	2.58	34.615	2413.	2331.	* 2339	* 618.2	35.4	2218.4	77.2	7.978	* 34.6	2221.8	74.6	12.618	7.899	8.757	13.7	-11.9
416	1943	2.31	34.628	2417.	2331.	* *	* 597.3	34.5	2217.3	79.2	7.983	* 33.6	2221.1	76.3	12.424	7.986	8.774	13.7	-12.4
417	2117	2.11	34.639	2417.	2329.	* 2353	* 584.8	33.9	2214.9	88.1	7.991	* 33.8	2219.1	76.9	12.389	7.987	8.781	12.5	-14.1
418	2258	1.99	34.651	2422.	2326.	* *	* 558.2	32.1	2289.6	84.3	8.816	* 31.2	2214.2	88.7	11.981	7.924	8.828	14.5	-12.7
415	2464	1.88	34.659	2426.	2338.	* *	* 545.8	32.2	2213.4	84.4	8.817	* 31.2	2218.3	89.5	12.867	7.918	8.818	12.4	-15.3
428	2638	1.75	34.664	2428.	2335.	* 2358	* 567.9	33.4	2215.8	81.8	8.883	* 32.3	2224.9	77.8	12.678	7.897	8.798	7.8	-28.5
421	2813	1.75	34.669	2426.	2331.	* *	* 558.8	32.5	2214.7	83.9	8.815	* 31.3	2228.2	79.5	12.528	7.982	8.828	7.5	-21.4
422	2987	1.67	34.674	2425.	2334.	* 2345	* 565.3	33.4	2218.8	81.8	8.884	* 32.1	2224.7	77.2	13.853	7.884	8.785	3.3	-26.2
423	3162	1.61	34.677	2424.	2323.	* *	* 524.8	31.1	2285.8	86.9	8.833	* 29.8	2211.4	81.5	12.388	7.987	8.832	5.8	-24.3
181	3314	1.573	34.682	2424.	2342.	* 2363	* 681.8	35.6	2229.1	77.3	7.979	* 34.2	2235.5	72.4	14.288	7.845	8.736	-5.6	-36.2
424	3337	1.58	34.681	2423.	2323.	* *	* 527.3	31.3	2289.4	86.3	8.831	* 29.9	2212.1	81.8	12.656	7.898	8.824	2.8	-27.9
182	3486	1.537	34.682	2424.	2335.	* *	* 578.1	33.8	2228.4	88.7	8.888	* 32.4	2227.2	75.4	13.811	7.868	8.767	-4.6	-35.9
184	3737	1.486	34.685	2422.	2316.	* 2358	* 583.1	29.9	2196.7	89.4	8.849	* 28.5	2284.3	83.3	12.588	7.988	8.847	8.8	-32.2
185	3837	1.443	34.689	2415.	2389.	* *	* 588.6	29.8	2189.9	89.2	8.858	* 28.3	2197.7	83.8	12.698	7.897	8.844	-1.7	-34.2
186	3937	1.382	34.695	2405.	2296.	* *	* 486.1	29.8	2176.4	98.6	8.859	* 27.5	2184.4	84.1	12.521	7.982	8.855	-2.8	-34.9
187	4086	1.335	34.785	2392.	2288.	* 2312	* 471.7	28.2	2159.9	91.8	8.869	* 26.7	2188.2	85.1	12.418	7.986	8.865	-3.8	-36.6
188	4234	1.225	34.718	2376.	2274.	* 2384	* 498.8	38.8	2157.9	96.1	8.844	* 28.3	2165.3	79.4	13.372	7.874	8.887	-18.9	-45.8
189	4334	1.158	34.711	2376.	2262.	* 2298	* 457.8	37.6	2141.9	92.5	8.877	* 26.8	2158.7	85.3	12.468	7.984	8.868	-6.4	-41.8
118	4488	1.887	34.733	2376.	2272.	* *	* 489.8	29.6	2155.2	87.2	8.858	* 27.9	2164.1	88.8	13.476	7.878	8.814	-13.9	-49.8
111	4655	1.867	34.787	2375.	2269.	* 2333	* 481.9	29.1	2151.7	88.2	8.858	* 27.4	2168.9	88.7	13.499	7.878	8.821	-15.9	-51.7
112	4829	1.873	34.787	2381.	2272.	* 2288	* 473.8	28.6	2153.4	98.8	8.864	* 26.9	2163.1	82.8	13.468	7.871	8.935	-17.2	-53.9
116	4998	1.887	34.787	2383.	2266.	* *	* 448.6	27.1	2144.7	94.2	8.886	* 25.3	2154.9	85.8	12.984	7.887	8.873	-16.2	-53.4

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
268	2	3 1 74	1316	15 16.3 S	159 54.4 W	5835
258	3	3 1 74	1914	15 16.5 S	178 8.8 W	5810
268	4	3 1 74	2258	15 14.1 S	178 1.9 W	4999

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (E-6)	TIT (E-6)	GC TC02 (E-6)	CALC PARAMETERS P=1ATM, T=INSITU				CALC PARAMETERS P.T=INSITU				DELTA CO3 (CALC) (M/KG)	DELTA CO3 (ARAG) (M/KG)			
							TC02 (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)			PH	PH	ICP (E-6)
489	16	28.88	34.949	2319.	1916.	* 1931	* 295.1	7.6	1624.3	284.1	8.312	* 7.6	1624.3	284.8	4.888	8.312	2.918	238.9	218.6
428	188	26.65	36.188	2393.	2085.	* 2824	* 321.4	8.7	1722.2	274.1	8.284	* 8.7	1722.5	273.8	5.242	8.288	2.898	225.2	287.8
427	175	23.19	38.073	2395.	2042.	* 2855	* 325.3	9.6	1783.1	249.3	8.272	* 9.6	1783.5	248.9	5.421	8.256	2.632	292.7	182.8
428	258	28.69	35.838	2377.	2073.	* *	* 358.3	11.3	1846.3	215.4	8.238	* 11.3	1846.9	214.8	6.885	8.221	2.256	168.8	147.1
429	314	17.98	35.433	2351.	2076.	* 2184	* 354.5	12.2	1869.2	194.7	8.224	* 12.1	1869.9	194.8	6.123	8.213	2.815	146.5	125.4
430	399	12.73	34.843	2319.	2132.	* 2152	* 439.2	17.7	1977.3	136.4	8.126	* 17.6	1978.8	135.7	7.737	8.111	1.386	37.2	53.8
431	473	9.63	34.613	2311.	2188.	* 2189	* 573.5	25.5	2864.6	97.9	8.811	* 25.4	2865.5	97.1	18.153	7.993	8.985	47.9	26.2
432	547	7.39	34.478	2312.	2188.	* 2284	* 491.1	23.5	2854.3	182.1	8.864	* 23.4	2855.4	181.2	9.854	8.843	1.823	51.3	29.3
433	597	6.358	34.398	2389.	2165.	* 2199	* 432.5	21.6	2835.1	188.4	8.189	* 21.4	2836.3	187.3	8.198	8.887	1.882	56.9	34.8
381	687	6.896	34.48	2381.	2194.	* *	* 558.8	27.7	2878.4	87.9	8.812	* 27.5	2879.5	87.8	18.267	7.989	8.872	36.5	14.3
434	616	6.88	34.483	2312.	2194.	* 2199	* 512.2	25.8	2874.2	94.8	8.843	* 25.6	2875.4	93.8	9.574	8.819	8.938	42.5	28.3
382	557	9.548	34.489	2312.	2288.	* 2232	* 523.2	26.8	2882.5	98.6	8.832	* 26.6	2883.8	99.6	9.847	8.887	8.984	38.7	16.3
383	595	5.214	34.487	2314.	2282.	* *	* 517.4	26.9	2884.5	98.7	8.833	* 26.6	2885.8	99.6	9.885	9.885	8.983	38.3	15.9
385	585	4.688	34.458	2338.	2225.	* 2254	* 538.3	28.5	2189.4	87.1	8.828	* 28.2	2111.8	85.9	18.256	7.989	8.967	33.7	18.9
386	985	4.281	34.487	2343.	2255.	* *	* 686.4	32.5	2143.7	78.7	7.973	* 32.2	2145.4	77.4	11.542	7.938	8.783	24.4	1.4
387	1882	3.751	34.492	2349.	2255.	* 2298	* 569.8	31.2	2142.1	81.7	7.997	* 30.8	2144.8	88.2	11.826	7.958	8.811	26.3	3.8
388	1183	3.582	34.518	2359.	2258.	* *	* 547.8	38.2	2145.2	84.5	8.813	* 29.8	2147.4	82.8	18.717	7.978	8.838	28.8	4.4
389	1281	3.281	34.537	2369.	2284.	* 2298	* 686.8	33.7	2172.6	77.6	7.974	* 33.2	2174.9	75.9	11.855	7.926	8.768	28.2	-3.6
318	1299	3.141	34.559	2373.	2287.	* *	* 688.4	33.6	2175.2	78.3	7.977	* 33.8	2177.6	76.3	11.868	7.926	8.773	19.8	-4.3
311	1446	2.788	34.588	2384.	2286.	* 2335	* 545.6	38.9	2178.6	84.5	8.816	* 38.3	2173.4	82.2	18.994	7.959	8.833	24.4	-8.2
312	1592	2.592	34.597	2392.	2388.	* *	* 683.8	34.5	2195.9	77.7	7.976	* 33.8	2198.9	75.3	12.232	7.913	8.764	16.1	-8.9
314	1748	2.486	34.612	2393.	2298.	* 2323	* 553.4	31.8	2183.8	83.1	8.818	* 31.1	2186.5	88.5	11.451	7.941	8.816	19.8	-5.7
315	1891	2.255	34.624	2485.	2292.	* *	* 487.4	28.2	2171.1	92.7	8.862	* 27.4	2174.9	99.6	18.291	7.988	8.918	27.5	1.6
316	2841	2.182	34.637	2412.	2311.	* 2332	* 538.8	38.8	2193.6	86.6	9.829	* 38.8	2197.6	83.4	11.263	7.948	8.847	19.7	-6.7
317	2194	2.886	34.644	2418.	2311.	* *	* 535.8	31.2	2194.3	85.5	8.825	* 38.3	2198.6	82.1	11.545	7.938	8.833	16.8	-13.8
218	2541	1.933	34.651	2417.	2321.	* 2343	* 547.5	32.8	2284.8	84.1	9.816	* 31.1	2289.5	98.5	11.934	7.923	8.818	13.7	-13.6
319	2493	1.869	34.657	2419.	2319.	* *	* 531.5	31.2	2281.6	86.2	8.828	* 38.1	2286.6	92.3	11.772	7.929	8.936	13.9	-13.9
320	2648	1.819	34.662	2424.	2318.	* 2344	* 589.9	38.8	2198.6	89.5	8.846	* 28.9	2283.9	85.2	11.463	7.941	8.865	15.2	-13.1
321	2789	1.772	34.666	2425.	2316.	* *	* 499.8	29.4	2195.5	91.1	8.854	* 28.3	2281.2	86.5	11.393	7.943	8.879	14.9	-14.8
281	2988	1.748	34.668	2432.	2335.	* 2344	* 545.8	32.1	2217.8	85.8	8.828	* 38.9	2223.6	88.5	12.466	7.984	8.818	7.5	-21.6
282	3898	1.676	34.671	2421.	2338.	* *	* 563.7	33.3	2215.8	81.7	8.884	* 32.8	2221.1	76.9	13.174	7.888	8.782	1.7	-28.2
283	3296	1.612	34.677	2421.	2321.	* 2348	* 527.5	31.2	2283.5	86.3	8.831	* 29.9	2218.8	81.1	12.618	7.899	8.924	3.4	-27.2
285	3627	1.473	34.689	2388.	2288.	* *	* 514.5	38.6	2171.9	85.4	8.834	* 29.2	2179.1	79.7	12.984	7.889	8.918	-2.2	-34.8
286	3692	1.445	34.696	2386.	2383.	* 2317	* 582.8	34.7	2191.4	76.9	7.985	* 33.1	2198.4	71.4	14.682	7.836	8.727	-11.3	-43.3
288	4818	1.256	34.788	2372.	2274.	* 2294	* 512.7	38.8	2159.3	84.8	8.832	* 29.2	2167.1	77.7	13.457	7.971	8.798	-9.4	-42.7
218	4318	1.864	34.787	2368.	2272.	* 2291	* 515.7	31.2	2157.9	82.9	8.828	* 29.5	2166.4	76.2	13.983	7.854	8.775	-15.4	-49.9
212	4673	1.837	34.787	2384.	2281.	* 2292	* 494.8	29.9	2154.1	86.9	8.847	* 28.2	2173.4	79.4	13.815	7.868	8.888	-17.5	-53.4
216	4863	1.858	34.787	2368.	2263.	* *	* 482.8	29.2	2146.3	87.5	8.854	* 27.4	2196.8	79.7	13.832	7.859	8.818	-28.2	-56.9
222	5817	1.866	34.786	2379.	2278.	* 2292	* 473.8	28.6	2151.5	89.9	8.865	* 25.7	2161.6	81.7	13.695	7.863	8.831	-28.6	-57.9

CARSONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
263	3	10	1 74	1455	16 39.9 S	167 4.6 W
263	5	11	1 74	3019	16 38.7 S	167 7.8 W
263	7	11	1 74	3537	16 37.3 S	167 7.8 W

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS				*CALC PARAMETERS P=1ATM.T=INSITU*						CALC PARAMETERS P.T=INSITU				DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (ED/KG)	TIT TC02*(M/KG)	* GC TC02*(M/KG)	* PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARRG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)			(E-6)	(E-6)
712	2	28.68	34.548	2318.	1916.	* 1917	* 298.8	7.0	1638.1	278.2	8.388	* 7.0	1638.1	278.2	4.924	0.388	2.824	233.8	212.7
711	37	28.35	34.793	2322.	1932.	* 1932	* 306.2	9.0	1648.3	275.6	8.388	* 8.0	1648.4	275.5	5.027	0.299	2.818	238.2	289.9
725	77	26.45	35.688	2377.	1981.	* 1977	* 259.7	8.2	1693.2	279.6	9.386	* 8.2	1693.4	279.4	4.967	3.384	2.923	233.9	213.5
725	116	24.54	35.754	2388.	2085.	* 2085	* 296.8	8.5	1725.2	278.3	8.387	* 8.5	1726.5	278.0	4.979	0.383	2.838	224.2	283.7
727	176	22.34	35.864	2351.	2085.	* 2055	* 305.8	11.7	1853.3	218.1	8.218	* 11.6	1853.7	217.7	6.249	9.284	2.298	171.4	158.7
728	245	20.24	35.744	2387.	2083.	* 2082	* 354.0	11.3	1856.0	215.7	8.235	* 11.3	1856.6	215.1	5.934	8.227	2.254	168.3	147.4
725	383	17.73	35.485	2355.	2085.	* 2055	* 362.8	12.5	1884.9	191.6	8.217	* 12.4	1883.7	198.9	6.228	8.286	1.381	143.5	122.4
738	431	11.33	34.724	2331.	2164.	* 2161	* 469.6	19.8	2028.0	124.2	9.289	* 19.6	2021.8	123.4	9.275	8.882	1.256	74.6	53.1
731	505	8.279	34.511	2322.	2189.	* 2189	* 589.3	23.7	2062.1	183.2	8.855	* 23.6	2063.1	182.3	9.216	8.835	1.035	52.0	38.9
732	588	6.428	34.371	2382.	2175.	* 2175	* 483.8	24.1	2052.2	98.7	8.865	* 23.9	2053.4	97.8	9.073	9.842	0.985	47.5	25.3
582	676	5.888	34.383	2326.	2217.	* 2199	* 544.5	27.7	2099.9	89.5	8.828	* 27.4	2101.2	88.4	10.144	7.994	0.891	37.4	15.8
733	686	5.57	34.485	2325.	2223.	* 2223	* 567.1	29.1	2188.3	85.7	8.882	* 28.8	2189.6	84.6	10.578	7.976	0.853	33.5	11.1
734	786	4.92	34.427	2346.	2245.	* 2245	* 565.8	29.6	2129.8	85.6	8.885	* 29.3	2131.3	84.4	10.618	7.974	0.851	32.4	9.7
586	984	4.321	34.458	2359.	2258.	* 2258	* 525.6	28.2	2131.9	89.9	9.833	* 27.9	2133.7	98.5	10.843	7.998	0.894	35.5	12.4
587	1052	3.689	34.585	2377.	2294.	* 2288	* 627.4	34.4	2182.7	76.9	7.963	* 34.8	2184.6	75.4	11.985	7.921	0.763	21.1	-2.3
588	1280	3.319	34.532	2395.	2388.	* 2297	* 687.1	33.7	2195.0	79.3	7.978	* 33.2	2197.3	77.5	11.745	7.938	0.785	21.9	-2.8
512	1791	2.396	34.612	2423.	2347.	* 2317	* 647.8	37.2	2235.3	74.5	7.953	* 36.4	2238.8	71.9	13.157	7.881	0.729	18.7	-14.9
515	2188	2.185	34.637	2431.	2337.	* 2310	* 563.4	32.7	2228.0	83.5	8.888	* 31.9	2224.9	88.2	11.896	7.925	0.815	16.8	-18.6
516	2261	1.958	34.646	2438.	2333.	* 2333	* 545.1	32.8	2216.8	35.8	8.818	* 31.1	2228.8	81.5	11.888	7.928	0.827	15.5	-11.5
517	2422	1.915	34.653	2427.	2338.	* 2338	* 546.9	32.8	2213.8	85.8	8.819	* 31.8	2217.8	81.2	11.966	7.922	0.824	13.5	-14.1
519	2742	1.776	34.666	2441.	2335.	* 2329	* 514.7	38.3	2214.8	89.9	8.844	* 29.2	2228.4	85.5	11.688	7.936	0.969	14.3	-14.3
522	3218	1.619	34.678	2437.	2331.	* 2327	* 518.1	38.2	2211.1	89.7	8.847	* 28.9	2217.6	84.5	12.861	7.919	0.859	7.8	-22.5
381	3588	1.543	34.687	2433.	2319.	* 2319	* 475.9	28.5	2196.7	93.9	8.878	* 27.1	2203.9	88.8	11.724	7.931	0.895	7.7	-23.6
382	3688	1.587	34.688	2433.	2338.	* 2346	* 548.8	32.6	2221.5	83.9	8.817	* 31.1	2228.6	78.3	13.484	7.873	0.796	-3.2	-34.9
383	3788	1.472	34.689	2433.	2335.	* 2335	* 535.9	31.9	2217.6	85.5	8.826	* 30.4	2225.8	79.7	13.254	7.978	0.918	-3.2	-35.2
384	3889	1.422	34.691	2428.	2331.	* 2331	* 537.7	32.8	2214.8	94.9	9.823	* 30.5	2221.6	79.9	13.454	7.971	0.883	-5.3	-37.7
385	3899	1.353	34.696	2421.	2319.	* 2329	* 515.8	38.8	2288.9	87.3	8.839	* 29.2	2288.7	81.8	13.182	7.883	0.824	-4.5	-37.3
386	4848	1.329	34.781	2411.	2383.	* 2383	* 489.9	29.3	2183.6	98.1	8.857	* 27.8	2191.8	83.5	12.719	7.896	0.849	-4.1	-37.5
387	4199	1.274	34.785	2411.	2297.	* 2295	* 469.8	28.1	2175.6	93.3	8.874	* 26.6	2184.2	86.3	12.394	7.987	0.877	-3.5	-37.5
388	4348	1.215	34.718	2482.	2296.	* 2296	* 492.3	29.6	2177.6	88.8	8.853	* 27.9	2186.3	81.8	13.288	7.879	0.832	-18.1	-44.7
385	4538	1.136	34.712	2488.	2288.	* 2288	* 478.3	28.3	2167.7	92.8	8.871	* 26.7	2176.9	84.4	12.985	7.889	0.859	-18.3	-45.7
318	4722	1.898	34.729	2487.	2383.	* 2293	* 498.9	38.1	2184.9	98.8	8.848	* 28.3	2194.4	88.3	13.841	7.859	0.817	-17.3	-53.4
311	4896	1.892	34.788	2397.	2295.	* 2295	* 583.8	38.4	2177.9	86.7	8.843	* 28.5	2187.7	78.8	14.237	7.847	0.682	-21.5	-58.3
312	5097	1.897	34.788	2482.	2285.	* 2298	* 466.9	28.2	2168.2	92.6	8.874	* 26.3	2178.6	84.8	13.495	7.978	0.855	-19.5	-57.2
319	5688	1.147	34.788	2486.	2281.	* 2289	* 431.8	26.8	2155.8	99.1	8.185	* 24.1	2167.5	89.4	13.113	7.882	0.989	-22.7	-62.5
322	5689	1.153	34.788	2481.	2388.	* 2388	* 529.4	38.7	2183.8	86.3	8.839	* 28.5	2194.3	77.2	15.475	7.818	0.786	-36.4	-76.6

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 265 2 14 1 74 0234 17 48.8 S 164 59.8 W 5418
 265 3 14 1 74 0936 17 47.4 S 164 59.4 W 5369

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	MEASURED PARAMETERS					CALC PARAMETERS P=LATH.T=INSITU					CALC PARAMETERS P.T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (M/KG)	
		TEMP. (C)	SAL. (0/00)	TALK (EO/KG)	TIT (M/KG)	GC (E-6)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH			PH
301	6	28.433	35.219	2347.	1951.	* 1956	* 318.5	8.1	1663.1	279.8	8.297	* 8.1	1663.1	279.8	5.847	8.297	2.889	234.7	214.4
302	52	27.563	35.541	2363.	1969.	* 1969	* 309.9	8.2	1682.6	278.2	8.297	* 9.2	1682.8	278.8	5.874	8.295	2.896	232.6	212.2
303	93	26.242	35.999	2391.	1996.	* 1993	* 305.2	9.4	1708.8	278.8	8.388	* 8.3	1709.1	278.6	5.842	8.297	2.939	233.8	212.5
304	191	21.986	35.983	2397.	2071.	* 2076	* 361.7	11.1	1835.7	224.2	8.231	* 11.8	1836.2	223.8	5.959	8.225	2.355	177.4	156.7
305	286	18.196	35.498	2358.	2099.	* 2093	* 392.3	13.3	1988.8	184.8	8.189	* 13.3	1981.5	184.2	6.625	8.179	1.917	137.8	115.9
306	356	15.164	35.185	2336.	2089.	* 2112	* 355.9	13.3	1988.7	175.1	9.214	* 13.2	1981.5	174.3	6.292	8.281	1.794	126.3	105.1
307	434	11.237	34.734	2325.	2127.	* 2153	* 386.9	16.3	1968.2	142.5	8.178	* 16.2	1969.1	141.6	7.885	8.155	1.442	92.8	71.3
308	498	9.258	34.566	2318.	2158.	* 2158	* 455.8	28.6	2818.7	115.8	8.899	* 28.4	2819.7	114.9	8.386	8.881	1.164	55.5	43.7
309	527	5.412	34.383	2318.	2188.	* 2282	* 583.6	25.1	2856.7	96.2	3.858	* 24.8	2867.9	95.2	9.412	9.826	0.968	44.6	22.4
310	819	4.383	34.398	2331.	2226.	* 2241	* 541.9	28.5	2118.3	87.2	8.819	* 28.2	2111.9	85.9	18.383	7.987	0.866	33.7	18.9
311	1084	3.947	34.488	2361.	2257.	* 2257	* 537.9	29.2	2148.5	87.3	8.823	* 28.8	2142.5	85.7	18.385	7.984	0.866	31.8	8.5
314	1327	2.994	34.555	2376.	2298.	* 2298	* 597.2	33.6	2179.2	78.2	7.988	* 33.8	2188.7	76.3	11.835	7.927	0.773	19.5	-4.7
316	1869	2.518	34.881	2485.	2323.	* 2323	* 615.5	35.2	2218.8	77.8	7.978	* 34.5	2214.8	74.5	12.487	7.984	0.756	14.6	-18.7
317	1842	2.332	34.616	2417.	2327.	* 2328	* 588.5	33.5	2212.3	81.2	7.995	* 32.7	2215.9	78.4	11.988	7.922	0.796	16.8	-9.8
318	2818	2.185	34.638	2416.	2358.	* 2358	* 698.6	48.8	2248.3	69.6	7.924	* 39.1	2244.1	66.8	14.368	7.843	0.679	3.4	-22.9
319	2195	2.836	34.642	2427.	2332.	* 2326	* 556.8	32.4	2215.7	93.9	8.812	* 31.5	2228.8	88.5	11.897	7.925	0.817	15.3	-11.6
320	2371	1.932	34.658	2427.	2331.	* 2331	* 558.8	32.2	2214.4	84.4	8.816	* 31.2	2219.1	88.7	11.935	7.921	0.828	13.6	-13.8
322	2771	1.762	34.665	2428.	2322.	* 2322	* 518.4	38.8	2282.3	89.8	8.846	* 28.9	2288.8	85.1	11.682	7.935	0.865	13.6	-15.1
323	2971	1.781	34.669	2428.	2337.	* 2383	* 566.6	33.4	2221.7	81.9	8.884	* 32.2	2227.5	77.3	13.848	7.885	0.785	3.5	-25.9
282	3338	1.681	34.678	2428.	2322.	* 2322	* 513.8	38.4	2283.1	88.5	8.842	* 29.1	2289.8	83.1	12.326	7.989	0.845	5.8	-25.7
324	3435	1.557	34.682	2419.	2312.	* 2312	* 499.7	29.6	2192.6	89.8	8.852	* 28.3	2199.5	84.2	12.168	7.915	0.856	4.8	-26.3
283	3498	1.564	34.682	2429.	2322.	* 2323	* 583.8	29.8	2282.1	98.1	8.851	* 28.5	2289.2	84.3	12.255	7.912	0.858	4.2	-27.8
285	3834	1.436	34.693	2415.	2388.	* 2389	* 496.8	29.6	2188.7	89.7	8.853	* 28.1	2196.4	83.5	12.596	7.988	0.849	-1.2	-33.7
286	4822	1.338	34.781	2485.	2294.	* 2294	* 478.4	28.6	2173.8	91.6	8.866	* 27.1	2182.8	84.9	12.441	7.985	0.864	-2.3	-35.6
287	4282	1.268	34.783	2483.	2293.	* 2299	* 479.9	29.8	2173.2	91.8	8.864	* 27.2	2181.7	84.1	12.711	7.896	0.855	-5.7	-39.7
288	4579	1.185	34.796	2481.	2289.	* 2289	* 471.3	28.4	2168.6	92.8	8.878	* 26.7	2177.6	84.7	12.726	7.895	0.862	-7.7	-42.4
289	4562	1.127	34.797	2396.	2294.	* 2279	* 469.8	29.3	2163.8	91.9	8.871	* 26.6	2173.1	84.3	12.922	7.889	0.858	-18.8	-46.3
218	4726	1.183	34.786	2399.	2270.	* 2270	* 441.8	26.6	2154.6	96.8	8.896	* 24.9	2164.4	83.6	12.375	7.987	0.982	-9.8	-45.1
211	4989	1.892	34.797	2392.	2289.	* 2298	* 497.9	38.1	2171.9	87.1	8.846	* 28.2	2181.6	79.2	14.148	7.849	0.886	-21.3	-58.2
212	5884	1.181	34.787	2394.	2298.	* 2277	* 495.2	29.9	2172.5	87.7	8.849	* 28.8	2182.6	79.5	14.293	7.845	0.888	-23.9	-61.5
217	5275	1.128	34.787	2395.	2387.	* 2295	* 556.6	33.6	2193.9	79.5	8.883	* 31.4	2284.8	71.5	16.247	7.789	0.728	-34.9	-73.4
223	5394	1.135	34.788	2393.	2278.	* 2282	* 459.4	27.6	2157.8	93.4	8.888	* 25.7	2168.8	84.3	13.679	7.864	0.858	-24.2	-63.1

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 267 3 16 1 74 1243 19 15.3 S 171 25.5 W 5480
 267 4 16 1 74 1335 19 15.5 S 171 27.6 W
 257 5 16 1 74 2110 19 15.8 S 171 27.9 W 5497

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	MEASURED PARAMETERS		CALC PARAMETERS P=1 ATM, T=INSITU						CALC PARAMETERS P,T=INSITU							
				TALK (EO/KG) (E-6)	TIT (M/KG) (E-6)	GC TC02 (M/KG) (E-6)	PCO2 (ATM) (M/KG) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	CP (M/KG) (E-6)	DELTA CO3= (M/KG) (E-6)	DELTA CO3= (M/KG) (E-6)	
316	5	20.34	34.931	2313.	1925.	* 1933	* 307.1	9.8	1643.4	273.5	0.297	* 8.0	1643.4	273.5	5.849	8.297	2.881	228.4	208.1
323	51	23.74	35.725	2369.	1988.	* 2057	* 298.2	8.3	1697.5	274.2	0.305	* 8.3	1697.7	274.0	4.977	8.383	2.878	228.6	208.1
325	103	23.91	35.777	2369.	1991.	* 2057	* 298.2	8.4	1716.0	269.7	0.318	* 8.4	1717.1	265.9	4.936	8.387	2.784	213.7	199.2
326	150	22.45	35.930	2300.	2057.	* 2057	* 356.3	10.7	1817.3	228.9	0.236	* 10.7	1817.7	228.9	5.873	8.231	2.408	182.4	161.8
327	203	20.50	35.716	2368.	2053.	* 2065	* 335.3	10.7	1819.9	222.5	0.252	* 10.6	1820.4	222.8	5.685	8.245	2.324	175.4	154.6
328	253	18.78	35.534	2350.	2048.	* 2048	* 323.2	10.0	1824.7	212.5	0.259	* 10.0	1825.4	211.9	5.623	8.258	2.287	164.0	143.9
329	302	17.25	35.366	2341.	2066.	* 2066	* 348.0	11.9	1860.2	193.9	0.235	* 11.9	1860.9	193.2	5.963	8.225	2.893	145.8	124.7
330	352	15.82	35.132	2331.	2091.	* 2091	* 365.7	13.7	1907.0	179.4	0.282	* 13.6	1907.8	169.6	6.457	8.198	1.747	121.7	100.4
331	401	13.87	34.971	2319.	2050.	* 2123	* 385.7	14.7	1926.7	156.6	0.191	* 14.6	1927.6	159.7	6.650	8.177	1.937	107.3	95.9
332	450	9.294	34.593	2302.	2125.	* 2125	* 350.1	17.5	1903.2	127.0	0.150	* 17.8	1904.3	126.9	7.384	8.132	1.287	77.5	55.7
415	673	5.94	34.355	2306.	2106.	* 2106	* 500.2	25.3	2065.7	95.8	0.050	* 25.1	2067.8	93.9	9.458	8.025	0.946	42.9	20.5
334	685	5.835	34.374	2300.	2195.	* 2195	* 523.8	26.6	2077.2	51.2	0.032	* 26.4	2078.6	98.1	9.078	8.006	0.908	30.9	16.5
416	732	5.51	34.380	2315.	2215.	* 2245	* 547.6	28.1	2097.2	87.6	0.015	* 27.9	2098.6	86.5	10.386	7.987	0.872	35.0	12.5
417	847	4.01	34.396	2326.	2210.	* 2210	* 527.6	27.8	2101.5	69.7	0.028	* 27.5	2103.2	97.4	10.186	7.995	0.891	34.9	12.8
418	372	4.19	34.441	2338.	2238.	* 2263	* 549.0	29.6	2123.8	84.6	0.011	* 29.2	2125.7	83.1	10.633	7.973	0.839	29.5	6.3
419	1122	3.46	34.480	2359.	2271.	* 2271	* 609.4	33.7	2168.4	76.9	0.798	* 33.2	2162.5	75.3	11.871	7.926	0.761	20.3	-3.3
420	1270	2.96	34.538	2370.	2203.	* 2301	* 617.3	34.8	2170.6	75.7	0.765	* 34.2	2168.9	73.8	12.175	7.915	0.748	17.6	-6.5
421	1420	2.67	34.570	2387.	2253.	* 2316	* 585.6	33.3	2105.2	79.5	0.388	* 32.7	2108.9	77.3	11.711	7.931	0.784	19.7	-4.8
422	1569	2.51	34.600	2396.	2353.	* 2353	* 564.6	32.3	2100.4	82.2	0.803	* 31.7	2191.9	79.8	11.458	7.941	0.918	20.8	-4.2
424	1893	2.252	34.624	2402.	2345.	* 2333	* 739.9	42.5	2237.3	65.2	0.896	* 41.6	2248.7	62.7	15.155	7.819	0.636	8.5	-29.4
425	2042	2.13	34.639	2411.	2332.	* 2332	* 622.7	36.2	2228.3	75.6	0.765	* 35.2	2224.2	72.6	13.094	7.883	0.737	9.8	-17.4
426	2191	2.046	34.643	2415.	2317.	* 2347	* 627.6	38.7	2199.9	87.3	0.832	* 29.0	2203.3	83.0	11.347	7.945	0.851	10.7	-9.2
427	2340	1.97	34.648	2424.	2310.	* 2310	* 485.8	28.3	2187.9	95.8	0.866	* 27.4	2192.7	85.8	10.629	7.974	0.913	23.1	-4.2
428	2485	1.90	34.655	2425.	2332.	* 2335	* 561.3	32.9	2216.3	82.8	0.800	* 31.8	2221.2	78.9	12.346	7.980	0.802	10.6	-17.2
429	2630	1.9	34.660	2422.	2326.	* 2326	* 548.6	32.1	2209.6	84.3	0.816	* 31.8	2214.0	80.1	12.268	7.911	0.814	10.2	-19.1
431	2936	1.74	34.669	2430.	2345.	* 2345	* 593.9	35.0	2231.0	79.8	0.905	* 33.7	2236.7	74.6	13.571	7.867	0.758	1.2	-28.1
432	3007	1.69	34.673	2420.	2325.	* 2329	* 534.6	31.6	2211.5	85.5	0.827	* 30.3	2217.7	31.0	12.485	7.984	0.824	5.9	-23.9
433	3235	1.535	34.677	2424.	2319.	* 2319	* 518.6	30.2	2199.8	89.8	0.844	* 28.5	2206.3	83.7	12.193	7.915	0.851	6.8	-23.9
503	5000	1.060	34.705	2385.	2207.	* 2200	* 512.9	31.0	2171.7	84.3	0.833	* 29.1	2181.7	76.3	14.835	7.829	0.776	-27.8	-64.6
504	5252	1.008	34.705	2385.	2284.	* 2284	* 502.6	30.4	2167.8	85.9	0.842	* 28.4	2178.2	77.4	14.840	7.829	0.788	-29.4	-67.9
505	2292	1.000	34.705	2377.	2297.	* 2272	* 542.0	32.7	2174.2	80.1	0.818	* 30.7	2184.3	72.8	15.996	7.796	0.733	-34.8	-73.3
506	5351	1.052	34.706	2389.	2259.	* 2259	* 511.5	30.9	2174.2	84.9	0.835	* 28.8	2184.7	76.4	15.282	7.818	0.778	-32.8	-71.8
507	5418	1.093	34.706	2381.	2289.	* 2274	* 535.7	32.3	2175.5	81.2	0.815	* 30.2	2185.9	72.9	15.978	7.796	0.741	-36.0	-75.1
508	5438	1.056	34.707	2384.	2269.	* 2269	* 455.4	27.9	2148.3	93.2	0.881	* 25.6	2155.4	84.1	13.718	7.863	0.855	-25.2	-64.4

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 268 1 17 1 74 1308 28 38.6 S 172 48.4 W 6294
 268 2 17 1 74 1721 28 29.9 S 172 48.6 W 6385

GC CO2 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EG/KG)	TIT * GC *		*CALC PARAMETERS P.=ATH, T.=INSITU*					CALC PARAMETERS P.T.=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (M/KG)	
					TC02*(M/KG)	TC02*(M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AH (E-9)	PH			ICP (E-6)
201	5	27.91	35.489	2339.	1927.	* 1918	* 283.3	7.5	1629.8	289.8	8.324	* 7.5	1629.8	289.7	4.741	8.324	3.887	244.6	224.3
202	78	24.12	35.752	2367.	1976.	*	* 276.2	8.8	1693.4	274.6	8.327	* 8.8	1693.6	274.4	4.733	8.325	2.876	220.8	288.4
203	145	22.25	35.784	2368.	2087.	* 2011	* 299.7	9.1	1749.8	248.1	8.294	* 9.1	1758.2	247.7	5.136	8.289	2.593	281.6	188.9
205	295	17.81	35.534	2346.	2048.	* 2071	* 314.3	18.8	1828.1	289.1	8.263	* 18.8	1828.8	288.4	5.564	8.253	2.171	161.1	148.8
206	378	15.49	35.293	2333.	3885.	*	* 359.6	13.3	1896.3	175.5	8.289	* 13.2	1897.1	174.7	6.359	8.197	1.887	126.7	185.4
207	445	11.89	34.818	2312.	2112.	* 2125	* 389.7	16.1	1952.3	143.6	8.167	* 16.8	1953.3	142.7	7.861	8.151	1.456	93.8	72.3
208	528	9.88	34.544	2298.	2143.	* 2153	* 467.9	21.3	2011.2	118.5	8.285	* 21.1	2012.2	189.6	8.685	8.265	1.118	68.8	38.2
218	744	5.743	34.353	2389.	2191.	* 2197	* 583.6	25.7	2071.5	93.8	8.848	* 25.4	2072.9	92.7	9.573	8.819	8.933	41.1	19.5
214	1191	3.144	34.595	2387.	2287.	*	* 545.5	38.5	2178.8	85.7	8.818	* 38.8	2173.2	83.8	18.678	7.971	8.848	28.2	4.4
225	1348	2.87	34.558	2388.	2315.	*	* 668.7	37.3	2285.4	72.3	7.948	* 36.7	2287.9	78.4	12.977	7.987	8.713	13.5	-18.8
227	1638	2.53	34.688	2396.	2294.	* 2381	* 493.3	28.2	2163.7	92.1	8.857	* 27.6	2167.8	89.4	10.173	7.993	8.987	29.7	4.6
228	1787	2.397	34.512	2408.	2312.	* 2318	* 553.7	31.8	2196.2	84.8	8.813	* 31.1	2199.7	81.2	11.437	7.942	8.824	28.1	-5.5
229	1937	2.27	34.624	2412.	2388.	*	* 521.8	38.1	2189.7	88.2	8.836	* 29.4	2193.6	85.1	10.974	7.968	8.864	22.5	-3.6
230	2085	2.159	34.633	2412.	2317.	* 2329	* 554.8	32.2	2281.2	83.6	8.811	* 31.3	2285.3	88.4	11.793	7.923	8.816	16.3	-18.2
231	2235	2.86	34.642	2418.	2319.	*	* 538.8	31.4	2281.9	85.7	8.824	* 38.4	2286.3	82.2	11.619	7.935	8.835	16.6	-18.4
232	2384	1.99	34.649	2415.	2331.	* 2335	* 598.2	34.9	2218.8	78.1	7.981	* 33.9	2222.6	74.5	13.819	7.985	8.757	7.4	-28.1
233	2584	1.889	34.656	2421.	2338.	* 2343	* 568.8	33.3	2215.8	81.7	8.882	* 32.2	2228.1	77.7	12.617	7.899	8.798	9.4	-19.8
181	2694	1.855	34.668	2438.	2327.	*	* 523.3	38.7	2288.2	88.8	8.836	* 29.6	2213.7	83.7	11.769	7.929	8.851	13.1	-15.3
234	2784	1.798	34.663	2428.	2336.	*	* 564.5	33.2	2228.4	82.4	8.886	* 32.8	2225.9	78.1	12.756	7.994	8.793	6.5	-22.3
182	2833	1.792	34.664	2423.	2323.	* 2344	* 531.3	31.2	2285.4	86.3	8.829	* 38.1	2211.1	81.8	12.133	7.916	8.831	9.7	-19.3
185	3177	1.637	34.677	2422.	2349.	* 2311	* 644.1	38.1	2237.9	73.8	7.951	* 36.7	2243.9	68.4	15.856	7.822	8.696	-7.8	-37.9
186	3276	1.554	34.682	2417.	2382.	*	* 473.4	28.8	2179.9	94.1	8.873	* 26.8	2186.6	88.6	11.487	7.943	8.981	11.1	-19.4
187	3375	1.549	34.691	2412.	2319.	* 2326	* 558.1	32.6	2283.9	82.4	8.812	* 31.2	2218.6	77.2	13.279	7.877	8.785	-1.5	-32.3
188	3525	1.465	34.786	2395.	2295.	* 2299	* 516.5	38.7	2179.7	35.6	8.834	* 29.4	2185.7	88.8	12.797	7.893	8.814	-8.6	-32.8
189	3679	1.375	34.715	2387.	2283.	* 2288	* 498.3	29.8	2165.7	97.5	8.846	* 28.3	2173.1	81.6	12.589	7.899	8.828	-1.8	-33.8
118	3794	1.315	34.716	2384.	2265.	*	* 446.1	26.7	2143.8	95.3	8.898	* 25.4	2158.8	98.8	11.586	7.939	8.984	4.8	-27.6
111	3884	1.242	34.716	2379.	2279.	* 2281	* 587.4	38.5	2163.4	85.2	8.837	* 29.8	2171.8	79.8	13.135	7.982	8.884	-6.4	-39.2
112	3976	1.191	34.716	2388.	2271.	*	* 475.5	28.6	2152.5	89.9	8.863	* 27.1	2168.5	93.4	12.469	7.984	8.849	-3.3	-36.4
115	4084	1.151	34.713	2375.	2283.	* 2285	* 535.4	32.3	2169.7	81.1	9.815	* 38.6	2177.6	74.8	14.118	7.858	8.761	-13.4	-46.9
117	4281	1.182	34.712	2388.	2289.	*	* 539.3	32.5	2175.8	98.6	8.813	* 38.8	2184.1	74.1	14.456	7.848	8.754	-16.9	-51.3
119	4481	1.878	34.711	2382.	2285.	* 2264	* 516.8	31.2	2178.8	83.8	8.838	* 29.5	2178.8	76.7	14.142	7.949	8.781	-17.2	-52.3
119	4738	1.866	34.789	2383.	2276.	*	* 481.2	29.1	2157.9	88.8	8.858	* 27.3	2167.4	81.3	13.529	7.969	8.827	-16.5	-52.6
120	4979	1.869	34.788	2384.	2284.	* 2298	* 585.9	38.6	2168.1	35.3	8.839	* 28.7	2177.9	77.4	14.586	7.938	8.788	-24.2	-61.4
121	5229	1.886	34.787	2331.	2299.	*	* 535.4	32.3	2175.5	81.2	9.816	* 38.3	2185.6	73.1	15.689	7.884	8.744	-32.6	-78.8
122	5463	1.184	34.787	2388.	2262.	* 2275	* 444.8	26.8	2148.5	94.7	8.889	* 24.9	2151.6	85.4	13.464	7.871	8.869	-24.3	-63.5
123	5723	1.131	34.787	2382.	2265.	*	* 449.1	27.1	2143.7	94.2	8.886	* 25.1	2155.4	84.5	13.982	7.857	8.868	-29.7	-78.1
124	5978	1.161	34.787	2383.	2263.	*	* 446.5	26.9	2143.4	94.7	9.888	* 24.8	2155.6	84.6	14.136	7.858	8.861	-34.2	-75.7

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
269	3	18	1 74	2332 23 59.0 S	174 26.0 W	5997
269	5	19	1 74	2334 24 01.5 S	174 24.5 W	5966
269	7	19	1 74	1623 23 59.2 S	174 26.3 W	5371

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8.88)	TIT		*CALC PARAMETERS P.=1ATM, T.=INSITU*					CALC PARAMETERS P, T.=INSITU					DELTA CO3= (CALC)	DELTA CO3= (ARAG)				
				TC02*	* TC02	PCO2	HC03	HC03-	CO3=	PH	HC03-	HC03-	CO3=	PH	PH			ICP	(E-6)	(E-6)	(E-6)
			(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)				
507	6	27.26	35.418	2339.	1949.	*	1949	* 303.5	0.1	1666.2	274.7	0.308	*	8.1	1666.2	274.7	5.019	0.299	2.852	229.5	209.2
510	112	22.27	35.617	2350.	2000.	*	2003	* 311.0	9.5	1757.9	248.7	0.279	*	9.5	1750.2	248.4	5.303	0.275	2.518	194.4	173.0
511	152	21.09	35.640	2344.	2013.	*	*	* 318.5	9.7	1779.8	232.4	0.277	*	9.7	1771.2	232.1	5.349	0.272	2.425	105.8	165.1
512	202	19.72	35.634	2345.	2033.	*	*	* 320.2	10.4	1803.4	219.2	0.263	*	10.4	1803.9	219.7	5.543	0.256	2.294	172.0	151.2
514	254	18.49	35.686	2349.	2042.	*	2068	* 312.1	10.5	1816.1	215.4	0.270	*	10.5	1816.7	214.8	5.481	0.261	2.242	167.7	146.8
525	304	17.57	35.577	2337.	2045.	*	2093	* 310.0	11.0	1829.3	204.7	0.250	*	11.0	1830.0	204.0	5.654	0.248	2.127	156.6	135.5
520	355	16.32	35.471	2332.	2056.	*	*	* 324.5	11.7	1850.8	193.6	0.248	*	11.6	1851.7	192.8	5.009	0.236	2.084	144.9	123.0
527	454	13.300	35.137	2304.	2102.	*	2105	* 411.2	16.2	1940.0	145.0	0.149	*	16.1	1941.9	144.1	7.361	0.133	1.484	95.3	73.0
528	554	10.479	34.769	2307.	2120.	*	2144	* 394.1	17.0	1968.1	134.8	0.150	*	16.9	1969.4	133.7	7.295	0.138	1.363	04.0	52.1
531	860	5.714	34.339	2290.	2174.	*	2192	* 479.0	24.4	2052.7	96.9	0.065	*	24.2	2054.4	95.5	9.285	0.032	0.961	43.0	20.1
532	950	4.069	34.362	2316.	2281.	*	*	* 499.1	26.2	2082.6	92.2	0.049	*	25.9	2084.6	90.5	9.768	0.018	0.912	36.0	13.6
701	1253	3.356	34.473	2351.	2255.	*	2269	* 554.0	30.7	2141.6	82.7	0.007	*	30.2	2144.0	80.0	11.019	0.008	0.817	24.8	13.6
703	1551	2.799	34.560	2373.	2282.	*	2299	* 570.7	32.3	2169.0	80.7	0.006	*	31.7	2172.0	78.3	11.620	0.005	0.793	19.5	-5.4
704	1690	2.631	34.584	2384.	2302.	*	*	* 610.6	34.8	2190.7	76.5	0.007	*	34.1	2194.0	74.0	12.514	0.003	0.750	13.0	-11.6
705	1849	2.472	34.603	2300.	2305.	*	2320	* 604.1	34.6	2193.3	77.0	0.007	*	33.8	2196.9	74.3	12.567	0.001	0.754	12.6	-13.1
706	1997	2.362	34.616	2395.	2391.	*	*	* 557.4	32.1	2186.2	92.7	0.007	*	31.3	2190.1	79.6	11.000	0.000	0.900	16.5	-9.0
707	2149	2.260	34.624	2400.	2323.	*	2314	* 631.5	36.5	2212.1	74.4	0.008	*	30.5	2216.2	71.3	13.439	0.002	0.724	6.6	-20.1
709	2450	2.050	34.643	2400.	2330.	*	2337	* 624.3	36.4	2218.6	75.0	0.003	*	30.3	2223.3	71.4	13.663	0.004	0.725	3.6	-24.1
710	2597	1.903	34.640	2400.	2312.	*	*	* 549.8	31.9	2196.2	83.9	0.016	*	30.8	2201.3	70.9	12.218	0.013	0.812	10.4	-17.7
711	2740	1.910	34.654	2411.	2342.	*	2330	* 665.9	39.0	2232.2	70.8	0.037	*	37.7	2237.3	66.9	14.942	0.026	0.600	-8.2	-32.9
714	3045	1.004	34.663	2416.	2317.	*	2352	* 533.1	31.3	2200.0	85.6	0.026	*	30.1	2206.1	80.0	12.444	0.005	0.821	6.2	-23.4
717	3342	1.665	34.676	2420.	2330.	*	2320	* 567.4	33.5	2215.3	81.1	0.002	*	32.1	2221.9	76.0	13.565	0.000	0.773	-2.2	-32.9
710	3430	1.618	34.688	2390.	2301.	*	*	* 531.9	31.5	2185.3	84.2	0.023	*	30.1	2192.1	70.8	13.005	0.000	0.801	-0.6	-31.7
719	3535	1.555	34.703	2389.	2294.	*	2306	* 535.5	31.0	2179.3	82.9	0.019	*	30.3	2186.2	77.4	13.268	0.000	0.788	-3.3	-34.7
720	3633	1.528	34.713	2300.	2286.	*	*	* 536.1	31.0	2172.0	82.2	0.017	*	30.4	2179.1	76.6	13.460	0.000	0.779	-5.4	-37.2
723	3962	1.265	34.714	2373.	2272.	*	2293	* 502.3	30.2	2156.3	85.6	0.040	*	28.6	2164.1	79.3	13.148	0.000	0.807	-7.1	-40.2
302	4206	1.090	34.709	2371.	2260.	*	2207	* 492.0	29.7	2151.7	85.6	0.040	*	29.1	2160.2	79.7	13.318	0.000	0.811	-11.3	-45.7
303	4462	1.076	34.707	2301.	2272.	*	*	* 473.4	28.6	2153.5	89.9	0.065	*	27.0	2162.5	82.6	13.005	0.000	0.840	-11.1	-46.2
304	4639	1.057	34.707	2370.	2265.	*	2200	* 403.7	29.2	2148.2	87.6	0.054	*	27.5	2157.4	80.1	13.556	0.000	0.815	-16.3	-52.0
305	4818	1.045	34.706	2375.	2257.	*	*	* 442.4	26.0	2135.7	94.5	0.090	*	25.1	2143.6	86.4	12.633	0.000	0.879	-12.7	-49.3
306	4994	1.052	34.706	2300.	2266.	*	2290	* 456.6	27.6	2145.0	92.6	0.079	*	25.0	2156.0	84.2	13.219	0.000	0.857	-17.7	-55.0
307	5171	1.061	34.705	2307.	2277.	*	*	* 471.9	20.5	2157.9	90.6	0.067	*	26.6	2160.3	82.1	13.017	0.000	0.835	-22.7	-60.7
300	5340	1.000	34.705	2370.	2264.	*	2203	* 456.4	27.6	2143.9	92.5	0.079	*	25.7	2154.0	83.5	13.660	0.000	0.850	-24.2	-63.0
309	5520	1.097	34.705	2304.	2205.	*	*	* 510.1	30.0	2169.4	84.0	0.036	*	20.7	2100.2	76.1	15.377	0.013	0.774	-34.6	-74.1
311	5693	1.110	34.704	2300.	2269.	*	2201	* 467.4	29.2	2149.0	91.0	0.070	*	26.2	2161.3	81.6	14.409	0.000	0.830	-32.2	-72.5
317	5037	1.136	34.704	2301.	2276.	*	*	* 400.5	29.4	2150.7	87.9	0.052	*	27.3	2170.3	79.4	15.215	0.010	0.790	-37.9	-70.0
323	5901	1.154	34.704	2304.	2206.	*	2279	* 515.1	31.0	2170.6	84.4	0.032	*	20.0	2102.3	75.0	16.193	0.000	0.763	-44.0	-85.6

CARBONATE REPORT

GESECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 273 2 22 1 74 0845 29 57.8 S 175 42.7 W 5818
 273 3 23 1 74 0857 29 56.8 S 175 41.2 W 5349

GC TC12 VALUES ARE NOT USED FOR COMPUTATION TC02==TC02-15 (UM/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATM.T=INSITU							CALC PARAMETERS P.T=INSITU					DELTA	DELTA		
SAMP NO	DEPTH (M)	TEMP (C)	SAL (E-3)	TALK (E-6)	TC02 (E-6)	GC (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	PH	ICP (E-6)	CO3= (E-6)	CO3= (E-6)
301	6	23.74	35.527	2368.	2081.	* 2020	* 308.7	3.8	1733.2	259.8	8.298	* 8.8	1733.2	259.8	5.835	8.298	2.637	213.7	193.3
302	32	23.21	35.566	2348.	1984.	*	* 308.8	8.9	1725.1	258.8	8.293	* 8.9	1725.2	249.9	5.118	8.292	2.686	204.5	184.1
303	51	20.97	35.707	2346.	2084.	* 2018	* 294.7	9.3	1755.2	239.5	8.295	* 9.3	1755.3	239.4	5.893	8.293	2.586	193.8	173.3
304	101	17.74	35.593	2336.	2041.	* 2049	* 318.2	18.9	1823.5	206.6	8.261	* 18.9	1823.7	286.4	5.524	8.258	2.153	168.3	139.6
305	249	14.24	35.388	2323.	2071.	* 2087	* 331.2	12.7	1891.4	176.9	8.234	* 12.6	1882.8	176.4	5.948	8.226	1.825	129.1	188.8
306	496	9.61	34.718	2298.	2126.	* 2122	* 413.1	18.4	1982.3	125.3	8.135	* 18.3	1983.4	124.4	7.635	8.117	1.266	75.8	93.2
307	594	7.38	34.469	2294.	2143.	* 2154	* 425.6	20.5	2018.2	112.3	8.116	* 20.3	2011.6	111.1	8.129	8.898	1.122	58.8	37.7
308	893	5.67	34.353	2305.	2178.	* 2178	* 478.4	24.8	2055.3	98.6	8.873	* 23.7	2057.1	97.2	9.137	8.839	0.978	44.4	21.5
309	1042	4.85	34.378	2314.	2193.	* 2194	* 477.9	25.1	2072.5	95.4	8.865	* 24.8	2074.5	93.7	9.437	8.825	0.944	39.6	16.2
310	1389	3.26	34.473	2345.	2288.	* 2254	* 596.3	33.2	2149.7	77.1	7.978	* 32.6	2152.3	75.8	11.993	7.921	0.758	17.8	-6.6
311	1688	2.632	34.575	2379.	2386.	* 2296	* 651.8	37.2	2196.8	72.8	7.943	* 36.4	2199.9	69.7	13.318	7.876	0.786	9.5	-15.8
312	1986	2.36	34.613	2396.	2299.	* 2318	* 587.9	29.2	2178.4	89.4	8.845	* 28.5	2174.3	86.2	10.886	7.966	0.875	23.2	-3.8
325	2435	2.89	34.644	2403.	2327.	* 2319	* 633.8	36.8	2216.3	73.9	7.957	* 35.7	2228.9	78.4	13.845	7.859	0.715	2.7	-24.9
326	2585	2.884	34.648	2411.	2387.	*	* 516.6	38.1	2188.7	88.1	8.839	* 29.1	2193.9	84.8	11.588	7.936	0.853	14.6	-13.5
327	2734	1.982	34.659	2415.	2318.	* 2352	* 511.9	38.8	2191.3	88.7	8.843	* 28.9	2196.8	84.3	11.635	7.934	0.856	13.3	-15.4
328	2884	1.881	34.671	2409.	2315.	*	* 558.5	32.4	2199.7	82.9	8.812	* 31.2	2205.4	78.5	12.673	7.897	0.797	5.7	-23.4
329	3023	1.73	34.585	2405.	2387.	* 2384	* 532.7	31.4	2198.7	84.9	8.824	* 30.2	2196.7	88.1	12.488	7.984	0.815	5.8	-23.8
330	3163	1.667	34.708	2391.	2289.	*	* 512.1	38.3	2172.2	86.6	8.837	* 29.8	2178.4	81.5	12.266	7.911	0.929	5.5	-24.6
331	3293	1.598	34.711	2386.	2275.	*	* 477.9	28.3	2155.5	91.2	8.864	* 27.1	2162.2	85.7	11.663	7.933	0.872	8.2	-22.3
332	3383	1.548	34.715	2379.	2272.	*	* 488.2	29.8	2154.2	88.8	8.854	* 27.7	2168.9	83.4	12.051	7.919	0.948	4.6	-26.3
201	3575	1.418	34.718	2377.	2276.	*	* 586.8	38.2	2168.1	85.7	8.838	* 28.8	2167.2	88.8	12.732	7.895	0.814	-1.2	-32.8
334	3584	1.41	34.718	2379.	2274.	*	* 492.8	29.4	2156.8	87.8	8.858	* 28.8	2164.8	82.8	12.483	7.986	0.834	3.6	-31.8
202	3676	1.339	34.717	2375.	2277.	*	* 515.9	38.9	2162.8	84.1	8.838	* 29.4	2169.2	79.3	13.894	7.983	0.797	-4.2	-36.2
203	3775	1.254	34.716	2375.	2273.	*	* 499.1	29.9	2157.8	86.1	8.843	* 28.5	2164.5	88.1	12.922	7.992	0.615	-3.9	-36.3
204	3877	1.197	34.714	2373.	2263.	*	* 469.8	28.3	2144.5	98.2	8.867	* 26.9	2152.3	33.8	12.253	7.912	0.853	-1.5	-34.3
205	4028	1.129	34.713	2374.	2254.	*	* 469.7	29.3	2145.3	98.4	8.867	* 26.9	2153.4	83.7	12.429	7.986	0.952	-3.7	-37.1
206	4188	1.086	34.711	2373.	2267.	*	* 481.7	29.1	2149.7	88.2	8.856	* 27.5	2159.1	81.4	12.918	7.889	0.928	-8.2	-42.1
207	4331	1.066	34.709	2372.	2276.	*	* 517.4	31.3	2161.7	83.8	8.828	* 29.6	2178.1	76.3	14.821	7.853	0.775	-19.5	-58.8
208	4432	1.045	34.708	2377.	2272.	*	* 485.4	29.4	2154.9	87.7	8.854	* 27.7	2163.8	88.5	13.383	7.876	0.928	-12.7	-47.6
209	4531	1.034	34.709	2377.	2272.	*	* 485.5	29.4	2154.9	87.8	8.854	* 27.7	2163.9	88.4	13.433	7.872	0.918	-14.3	-49.6
210	4638	1.028	34.705	2376.	2253.	*	* 458.8	27.7	2143.4	91.9	8.877	* 26.1	2152.8	84.2	12.841	7.991	0.856	-12.1	-47.8
211	4877	1.048	34.706	2375.	2269.	*	* 481.6	29.1	2151.6	89.2	8.857	* 27.3	2161.4	88.3	13.777	7.961	0.317	-19.7	-56.5
212	5127	1.058	34.705	2375.	2274.	*	* 499.8	38.2	2158.2	85.6	8.843	* 29.2	2168.3	77.4	14.579	7.936	0.788	-26.6	-64.4
214	5375	1.079	34.705	2377.	2278.	*	* 479.2	28.9	2152.3	88.8	8.859	* 27.8	2163.8	88.8	14.347	7.843	0.814	-28.2	-67.1
216	5544	1.111	34.705	2377.	2271.	*	* 483.7	29.2	2153.5	88.3	8.856	* 27.1	2164.7	79.2	14.834	7.829	0.886	-33.7	-73.7
223	5788	1.138	34.705	2375.	2274.	*	* 588.9	38.2	2158.1	85.7	8.841	* 29.8	2165.5	76.5	15.549	7.888	0.778	-39.8	-79.7

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 279 1 26 1 74 1314 36 31.3 S 179 36.0 W 4060

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	MEASURED PARAMETERS			*CALC PARAMETERS P=1ATM.T=INSITU*				CALC PARAMETERS P,T=INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARAG) (M/KG)				
				TALK (EQ/KG)	TC02* (M/KG)	TC02 (E-6)	PCO2 (ATM)	HCO33 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)			AH (E-9)	PH	ICP (E-6)	
101	7	19.812	35.666	2355.	2017.	*	297.4	9.3	1771.2	236.5	8.383	*	9.3	1771.2	236.5	4.985	8.382	2.473	191.1	170.6
102	100	16.000	35.497	2346.	2051.	* 2072	295.3	10.7	1834.2	206.1	8.283	*	10.7	1834.2	206.1	5.200	8.277	2.139	150.8	137.9
103	360	13.039	35.166	2338.	2103.	* 2118	360.6	14.3	1927.6	161.8	9.281	*	14.3	1928.5	168.3	6.484	8.188	1.652	112.1	98.7
104	540	10.132	34.918	2318.	2120.	* 2148	385.7	16.9	1974.4	136.8	8.166	*	16.7	1975.6	135.7	7.137	8.146	1.385	86.8	64.1
105	720	8.127	34.571	2311.	2140.	* 2163	393.3	18.4	1997.0	124.6	8.152	*	18.2	1998.6	123.2	7.582	8.125	1.249	72.0	49.6
106	900	6.698	34.444	2304.	2167.	* 2178	458.4	22.6	2040.8	104.4	8.087	*	22.3	2041.9	102.9	8.864	8.852	1.039	50.1	27.2
107	1056	5.790	34.435	2319.	2174.	*	423.4	21.5	2043.4	109.8	8.117	*	21.2	2045.6	107.2	8.380	8.877	1.082	53.1	29.3
108	1245	4.426	34.400	2325.	2231.	* 2238	575.9	38.8	2113.9	81.4	7.992	*	38.3	2121.2	79.5	11.485	7.943	8.802	23.7	-0.2
109	1499	3.406	34.492	2350.	2249.	*	587.0	38.1	2131.2	89.7	8.044	*	37.5	2134.2	87.3	10.356	7.985	8.802	29.8	4.3
110	1741	2.847	34.566	2392.	2302.	* 2296	582.6	32.9	2188.4	98.6	7.991	*	32.2	2191.8	78.8	11.956	7.922	8.791	17.4	-9.0
111	1900	2.481	34.600	2406.	2204.	*	462.2	36.5	2159.9	97.7	8.084	*	35.8	2164.0	94.3	9.958	8.866	8.956	31.2	5.0
112	2141	2.339	34.625	2412.	2315.	* 2337	559.5	31.7	2199.7	84.6	8.015	*	30.8	2202.9	81.3	11.742	7.930	8.825	16.7	-10.0
121	2430	2.12	34.646	2413.	2318.	*	554.2	32.2	2202.2	83.6	8.012	*	31.2	2207.0	79.8	12.160	7.915	8.810	12.2	-15.4
119	2493	2.090	34.649	2412.	2322.	*	573.4	33.3	2207.7	81.8	7.998	*	32.3	2212.5	77.2	12.625	7.399	8.704	9.0	-10.0
117	2701	1.871	34.685	2399.	2296.	*	514.5	30.2	2179.5	97.3	8.038	*	29.1	2194.1	92.9	11.824	7.927	8.842	11.3	-17.5
118	2934	1.776	34.703	2397.	2311.	* 2295	579.9	34.1	2198.2	78.7	7.989	*	32.9	2203.9	74.3	13.444	7.871	8.755	1.0	-20.3
120	3237	1.477	34.724	2401.	2203.	* 2299	457.0	27.2	2160.6	95.2	8.084	*	26.8	2167.3	89.7	11.890	7.955	8.913	12.7	-17.7
123	3707	1.179	34.716	2380.	2251.	*	394.2	23.7	2122.0	105.3	8.130	*	22.5	2130.2	90.4	10.269	7.900	1.001	14.2	-18.2

CARBONATE REPORT

GEOSSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	90T DEPTH
200	1	8 2 74	2035	56 1.0 S	170 3.9 E	5233
200	3	9 2 74	0426	56 0.0 S	170 5.0 E	5257
200	4	9 2 74	0658	56 0.0 S	170 5.0 E	5257

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02==TC02-15 (UM/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU				CALC PARAMETERS P,T=INSITU				DELTA	DELTA									
SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (EQ/KG)	TIT (M/KG)	GC TC02 (M/KG)	TC02 (M/KG)	PC02 (ATH) (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARAG) (M/KG)		
			(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)		
416	3	5.5	1 34.061	2297.	2109.	*	2109	*	324.8	16.1	1950.7	134.2	8.220	*	16.1	1950.7	134.2	6.020	8.220	1.340	80.1	57.4
419	31	6.4	1 34.060	2294.	2104.	*	2097	*	317.7	15.8	1953.0	135.2	8.226	*	15.8	1953.1	135.1	5.953	8.225	1.349	89.8	68.8
422	81	6.3	1 34.110	2300.	2115.	*	2113	*	320.7	16.4	1966.1	132.4	8.214	*	16.4	1966.3	132.2	6.153	8.211	1.322	85.6	64.7
423	101	6.3	1 34.114	2297.	2167.	*	*	*	467.6	23.4	2043.1	100.5	8.078	*	23.4	2043.3	100.3	8.439	8.074	1.003	53.6	32.6
424	154	5.86	34.153	2298.	2120.	*	1953	*	336.3	17.1	1975.1	127.9	8.203	*	17.0	1975.4	127.6	6.345	8.190	1.277	98.4	59.3
302	199	5.32	34.172	2296.	2119.	*	2144	*	331.4	17.2	1974.7	127.1	8.207	*	17.1	1975.1	126.8	6.322	8.199	1.270	79.2	50.0
303	249	5.20	34.191	2299.	2225.	*	2132	*	676.7	35.2	2118.7	71.1	7.926	*	35.1	2119.2	70.7	12.115	7.917	0.709	22.8	1.5
305	440	4.68	34.210	2290.	2153.	*	2162	*	396.7	21.0	2023.6	100.3	8.135	*	20.9	2024.6	107.5	7.617	8.118	1.070	50.1	36.3
307	746	3.36	34.307	2330.	2222.	*	2219	*	498.4	27.7	2105.8	80.5	8.046	*	27.4	2107.3	87.3	9.621	8.017	0.070	35.5	12.0
309	1044	2.53	34.443	2330.	2260.	*	2251	*	647.5	36.9	2153.6	69.5	7.930	*	36.5	2155.5	60.0	12.709	7.896	0.607	13.7	-9.0
310	1194	2.50	34.522	2350.	2247.	*	*	*	511.1	29.2	2131.6	96.2	8.036	*	20.7	2133.9	04.4	10.271	7.900	0.054	20.7	4.0
311	1300	2.41	34.597	2361.	2255.	*	2277	*	501.6	28.0	2130.1	90.1	8.044	*	20.3	2140.0	05.9	10.255	7.900	0.071	20.4	4.0
314	1705	2.20	34.697	2366.	2267.	*	2267	*	525.3	30.4	2152.2	94.4	8.025	*	29.7	2155.7	01.6	11.106	7.954	0.030	20.5	-5.1
326	2191	1.940	34.734	2372.	2265.	*	2271	*	493.6	20.9	2147.5	80.7	8.050	*	20.0	2151.0	05.2	10.002	7.963	0.067	20.1	-6.0
329	2500	1.634	34.735	2302.	2204.	*	2260	*	523.9	31.0	2160.7	04.3	8.027	*	29.9	2173.0	00.2	11.924	7.924	0.017	10.0	-17.3
330	2979	1.31	34.724	2372.	2292.	*	*	*	500.0	35.2	2101.7	75.1	7.977	*	33.9	2107.3	70.7	13.901	7.057	0.720	-3.3	-32.0
332	3301	1.10	34.716	2377.	2203.	*	2259	*	526.7	31.0	2169.2	02.1	8.022	*	30.4	2175.0	76.0	13.015	7.006	0.702	-2.1	-33.1
115	3694	0.906	34.709	2370.	2255.	*	2297	*	450.0	27.3	2134.0	92.9	8.002	*	25.9	2142.3	06.7	11.610	7.933	0.002	3.7	-20.4
116	3091	0.919	34.706	2374.	2260.	*	2270	*	479.1	29.1	2150.7	00.2	8.050	*	27.7	2150.5	01.9	12.533	7.902	0.033	-3.0	-36.7
117	4093	0.070	34.705	2300.	2200.	*	*	*	501.0	30.5	2164.2	05.2	8.041	*	20.9	2172.3	70.7	13.293	7.076	0.001	-9.0	-43.4
118	4290	0.047	34.700	2377.	2266.	*	2200	*	461.6	20.1	2147.0	00.0	8.073	*	26.6	2155.7	03.7	12.556	7.901	0.052	-7.6	-42.0
119	4489	0.032	34.699	2306.	2270.	*	*	*	473.0	20.9	2159.6	09.5	8.064	*	27.2	2160.7	02.1	13.061	7.994	0.035	-12.1	-47.4
120	4590	0.030	34.702	2376.	2269.	*	2204	*	474.4	20.9	2151.3	00.7	8.062	*	27.2	2160.7	01.1	13.379	7.074	0.035	-16.2	-52.3
121	4089	0.035	34.696	2306.	2272.	*	*	*	454.7	27.7	2151.5	02.7	8.000	*	26.0	2161.5	04.5	13.043	7.005	0.060	-19.9	-52.0
123	5106	0.032	34.699	2379.	2271.	*	2317	*	471.0	29.3	2152.9	09.3	9.065	*	26.9	2163.3	00.0	13.924	7.056	0.022	-24.4	-62.6
124	5220	0.031	34.697	2376.	2277.	*	2270	*	502.7	30.7	2161.7	04.6	8.039	*	20.7	2171.0	76.4	14.049	7.020	0.777	-29.4	-57.7

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
285	1	14 2 74	2242	61 29.1 S	163 50.0 E	3804
285	2	15 2 74	0245	61 29.5 S	170 5.0 E	4030
285	3	15 2 74	0642	61 29.7 S	170 10.0 E	4061

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM, T=INSITU*							CALC PARAMETERS P, T=INSITU			DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)		
				TIT (E-6)	TC02* (M/KG)	GC (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	ICP (E-6)				
314	9	2.24	33.963	2304.	2137.	*	* 312.7	10.2	1997.9	120.9	0.220	*	10.2	1997.9	120.9	6.024	0.220	1.204	74.6	53.0
326	33	2.25	33.963	2307.	2137.	*	* 307.5	17.0	1996.4	122.7	0.227	*	17.0	1996.5	122.7	5.940	0.226	1.221	75.2	55.3
330	96	2.24	33.963	2310.	2105.	*	* 414.9	24.1	2063.7	97.2	0.112	*	24.1	2063.0	97.1	7.793	0.100	0.967	50.2	29.2
214	150	1.19	34.131	2313.	2193.	*	* 415.6	25.1	2073.5	94.4	0.107	*	25.0	2073.0	94.1	7.926	0.101	0.942	46.0	25.6
210	349	1.97	34.525	2336.	2230.	*	* 513.0	30.0	2124.7	83.3	0.029	*	29.9	2123.4	82.7	9.666	0.015	0.037	33.9	12.2
226	499	2.11	34.631	2347.	2243.	*	* 490.5	29.0	2127.5	86.5	0.043	*	29.0	2120.5	85.7	9.404	0.023	0.070	35.7	13.7
230	947	1.94	34.720	2355.	2247.	*	* 485.0	26.4	2129.0	90.0	0.054	*	28.0	2131.7	97.3	9.629	0.016	0.000	33.6	10.4
232	1245	1.746	34.739	2350.	2243.	*	* 459.4	27.1	2123.4	92.6	0.075	*	26.6	2125.9	90.5	9.423	0.026	0.922	34.3	10.2
233	1394	1.62	34.739	2360.	2237.	*	* 433.1	25.6	2114.5	96.9	0.050	*	25.1	2117.3	94.5	9.053	0.043	0.963	36.9	12.4
126	2487	0.80	34.710	2372.	2262.	*	* 464.4	29.3	2143.5	90.2	0.070	*	27.3	2148.6	86.1	10.701	7.971	0.076	17.5	-10.4
120	2804	0.74	34.705	2373.	2261.	*	* 455.7	27.9	2141.0	91.3	0.077	*	26.0	2147.7	86.5	10.923	7.962	0.000	13.4	-15.9
129	3001	0.714	34.702	2307.	2262.	*	* 419.6	25.7	2137.7	90.6	0.112	*	24.6	2144.2	93.2	10.250	7.909	0.940	17.0	-12.2
134	3065	0.63	34.690	2300.	2259.	*	* 407.6	25.1	2133.1	100.9	0.123	*	23.7	2141.3	94.0	10.734	7.969	0.956	0.5	-24.3

CARBONATE REPORT

GEOSECS	PACIFIC	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
		296	1	17 2 74	1803	66 5.0 S	173 48.0 E	3408
		296	2	17 2 74	2353	66 5.0 S	173 45.0 E	3431
		296	3	18 2 74	0120	66 5.0 S	173 45.0 E	3431

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS			CALC PARAMETERS P=1 ATM. T=INSITU*							CALC PARAMETERS P,T=INSITU			DELTA CO3= (CALC) (M/KG) (E-6)	DELTA CO3= (ARAG) (M/KG) (E-6)				
			SAL. (0/20) (E-6)	TALK (EQ/KG) (E-6)	TIT TC02* (M/KG) (E-6)	GC TC02* (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AH (E-9)			PH	ICP (E-6)		
251	2	0.30	33.907	2307.	2160.	*	*	330.9	20.7	2030.0	109.3	0.192	*	20.7	2530.0	109.3	6.421	0.192	1.006	63.0	42.1
203	61	-1.50	34.260	2320.	2193.	*	*	344.6	23.1	2066.9	103.0	0.172	*	23.1	2067.0	102.9	6.767	0.170	1.034	56.1	35.0
205	70	-1.42	34.306	2345.	2204.	*	*	336.2	22.4	2074.8	106.0	0.105	*	22.4	2074.9	106.7	6.577	0.102	1.073	59.7	39.7
207	90	-0.40	34.447	2345.	2237.	*	*	439.0	20.1	2120.2	90.6	0.003	*	20.1	2120.4	89.5	0.322	0.000	0.093	41.5	20.4
227	344	1.345	34.716	2365.	2257.	*	*	477.3	29.5	2139.4	39.0	0.060	*	20.4	2140.1	89.5	0.995	0.046	0.300	39.6	17.9
229	590	1.15	34.717	2359.	2260.	*	*	499.7	30.1	2152.4	25.5	0.041	*	29.9	2153.6	24.6	0.590	0.010	0.961	33.0	11.5
333	1422	0.63	34.705	2372.	2250.	*	*	480.1	29.5	2151.4	37.1	0.056	*	20.9	2154.3	34.0	0.020	0.399	0.363	35.0	2.1
334	1643	0.545	34.701	2371.	2252.	*	*	461.3	20.4	2143.9	99.6	0.071	*	27.0	2147.3	96.9	0.076	0.005	0.094	35.9	1.5

CARBONATE REPORT

GEODECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 287 3 28 2 74 0141 69 5.0 S 173 38.0 W 4115
 297 5 28 2 74 1809 69 5.0 S 173 13.0 W 4115
 297 7 21 2 74 0132 69 5.0 S 173 18.0 W 4132

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATM, T=INSITU*										CALC. PARAMETERS P, T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EQ/KG)	TC02* (M/KG)	TC02 (E-6)	TIT (E-6)	GC (E-6)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)
581	2	-1.87	33.377	2288.	2122.	*	*	*	283.4	18.8	1987.9	115.3	0.245	18.8	1987.9	115.3	5.693	0.245	1.128	69.0	48.2
583	21	-1.49	33.384	2276.	2134.	*	*	*	389.5	28.8	2887.1	186.1	0.289	28.8	2887.1	186.8	6.281	0.288	1.838	59.6	39.7
585	41	-1.40	34.114	2331.	2178.	*	*	*	291.3	19.5	2832.5	118.8	0.239	19.4	2832.6	117.9	5.753	0.237	1.179	71.2	58.3
527	152	-0.31	34.458	2368.	2229.	*	*	*	378.9	24.2	2183.5	181.4	0.144	24.1	2183.8	181.1	7.273	0.138	1.821	53.6	32.4
785	588	1.27	34.726	2372.	2261.	*	*	*	467.9	28.1	2142.2	98.8	0.868	27.8	2143.4	89.8	9.824	0.845	0.914	38.9	16.5
725	1296	0.814	34.711	2363.	2267.	*	*	*	583.1	38.7	2152.4	83.9	0.837	38.2	2155.8	81.8	10.368	7.965	0.833	25.0	8.7
727	1693	0.68	34.784	2377.	2267.	*	*	*	461.2	28.4	2148.2	98.4	0.872	27.7	2151.7	87.6	9.892	0.885	0.891	27.8	1.5
383	2939	0.21	34.699	2375.	2278.	*	*	*	478.1	29.4	2152.9	87.7	0.863	28.2	2159.9	82.9	11.368	7.945	0.843	8.9	-28.6
734	3882	0.138	34.781	2388.	2264.	*	*	*	435.8	27.3	2143.2	93.6	0.894	26.1	2149.6	88.3	18.699	7.971	0.899	12.6	-17.5
386	3143	0.1	34.788	2376.	2258.	*	*	*	428.8	26.9	2136.5	94.7	0.188	25.7	2143.8	89.3	18.623	7.974	0.988	12.8	-17.5
389	3553	0.87	34.782	2375.	2259.	*	*	*	433.8	27.2	2138.3	93.5	0.895	25.9	2145.6	87.5	11.162	7.952	0.898	5.8	-26.8
311	3749	0.1	34.784	2375.	2259.	*	*	*	438.7	27.8	2136.9	94.1	0.897	25.7	2144.7	87.7	11.389	7.947	0.892	3.5	-29.1
318	3954	0.1	34.782	2372.	2278.	*	*	*	478.1	38.8	2153.9	86.1	0.855	28.5	2161.8	79.8	12.722	7.895	0.811	-7.3	-48.6
319	4881	0.1	34.785	2375.	2262.	*	*	*	442.9	27.8	2142.3	91.9	0.886	26.3	2158.5	85.2	11.882	7.925	0.867	-2.4	-35.9
324	4898	0.1	34.785	2377.	2259.	*	*	*	428.3	26.9	2137.5	94.7	0.188	25.4	2146.8	87.6	11.611	7.935	0.892	-1.4	-35.3

! FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSECS PACIFIC	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
	298	2	25	2 74	1855 58 0.0 S	174 0.0 W	5315
	298	4	26	2 74	0135 57 58.0 S	174 0.0 W	5116
	298	6	26	2 74	0613 57 56.0 S	174 0.0 W	4968

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02==TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/80)	TALK (EG/KG)	TIT TC02 (E-5)	GC TC02 (M/KG)	PC02 (ATH) (E-6)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AH (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
403	64	4.58	33.962	2301.	2115.	*	382.4	16.2	1966.4	132.5	8.248	16.1	1966.5	132.3	5.788	8.238	1.317	95.7	64.8
404	94	4.58	33.964	2303.	2118.	*	384.7	16.3	1969.8	131.9	8.238	16.3	1970.8	131.7	5.829	8.234	1.311	84.9	63.9
405	124	3.75	34.836	2289.	2142.	*	373.5	28.5	2812.4	189.1	8.154	28.5	2812.6	188.9	7.884	8.158	1.287	61.8	48.8
406	154	3.46	34.848	2388.	2139.	*	339.8	18.8	2882.8	117.4	8.192	18.8	2883.1	117.1	6.517	9.186	1.168	69.8	48.7
409	244	3.11	34.879	2385.	2152.	*	354.7	19.9	2819.3	112.8	8.175	19.8	2819.8	112.4	6.833	8.165	1.122	64.4	43.8
418	295	3.32	34.157	2312.	2166.	*	377.2	21.8	2836.8	189.8	8.153	28.9	2836.6	188.5	7.218	8.142	1.886	68.2	38.7
425	325	3.38	34.186	2388.	2168.	*	391.1	21.8	2848.8	185.4	8.138	21.7	2841.5	184.8	7.496	8.125	1.851	56.3	34.7
426	365	3.278	34.229	2328.	2191.	*	425.1	23.7	2867.7	99.6	8.187	23.6	2868.4	99.8	8.878	8.893	0.993	58.1	29.4
427	405	3.88	34.244	2318.	2197.	*	445.8	25.8	2876.8	95.2	8.887	24.9	2877.6	94.5	8.487	8.871	0.949	45.3	23.5
428	456	2.96	34.276	2321.	2284.	*	457.7	25.8	2885.1	93.1	8.877	25.7	2886.8	92.3	8.734	8.859	0.928	42.7	28.8
438	556	2.757	34.338	2337.	2219.	*	456.3	25.9	2899.1	93.9	8.888	25.7	2188.3	93.8	8.753	8.858	0.936	42.6	28.4
432	758	2.48	34.448	2345.	2248.	*	499.4	28.7	2124.2	87.2	8.844	28.4	2125.7	86.8	9.686	8.814	0.868	33.9	11.2
433	859	2.478	34.587	2354.	2289.	*	678.8	38.9	2182.3	67.7	7.922	38.5	2183.9	66.6	12.968	7.987	0.673	13.7	-9.3
601	987	2.48	34.532	2339.	2255.	*	588.7	35.4	2145.2	76.4	7.982	33.8	2146.9	75.8	11.338	7.946	0.768	21.8	-1.3
683	1188	2.32	34.628	2359.	2263.	*	537.8	31.8	2149.2	82.8	8.816	38.5	2151.4	81.1	18.665	7.972	0.823	26.2	2.5
684	1259	2.26	34.659	2368.	2258.	*	513.2	29.7	2142.5	85.9	8.834	29.2	2145.8	83.9	18.375	7.984	0.852	27.6	3.5
685	1418	3.19	34.698	2371.	2244.	*	433.1	25.1	2119.5	99.5	8.182	24.6	2122.4	97.8	8.972	8.847	0.887	39.4	14.9
686	1561	2.11	34.712	2368.	2262.	*	498.8	29.8	2145.8	88.1	8.846	28.4	2148.1	85.6	18.375	7.984	0.871	26.5	1.6
688	1863	1.98	34.735	2378.	2258.	*	474.8	27.8	2139.8	91.2	8.863	27.1	2142.8	89.1	18.289	7.991	0.897	26.2	8.3
689	2814	1.31	34.738	2371.	2268.	*	477.4	28.8	2141.2	98.8	8.862	27.3	2145.3	87.5	18.418	7.983	0.891	24.8	-2.3
625	2317	1.57	34.736	2374.	2249.	*	438.8	25.5	2125.2	98.3	8.183	24.7	2138.8	94.3	9.734	8.812	0.968	27.7	8.4
627	2619	1.343	34.728	2372.	2269.	*	497.4	29.7	2152.6	86.7	8.844	28.7	2157.8	82.5	11.488	7.948	0.848	12.6	-15.8
628	2821	1.23	34.724	2379.	2298.	*	437.4	26.3	2135.5	96.2	8.896	25.3	2141.4	91.4	18.372	7.984	0.938	19.2	-9.8
629	3023	1.12	34.719	2378.	2272.	*	483.8	29.2	2154.5	88.3	8.856	28.8	2168.6	83.4	11.622	7.935	0.849	8.8	-28.9
638	3225	1.841	34.714	2378.	2259.	*	448.8	26.6	2137.3	95.1	8.893	25.5	2143.9	89.6	18.851	7.965	0.912	12.6	-17.9
631	3427	8.955	34.711	2383.	2265.	*	443.6	26.9	2143.3	94.8	9.298	25.7	2158.3	89.8	11.129	7.954	0.905	9.4	-21.8
633	3833	8.06	34.785	2382.	2268.	*	453.7	27.6	2147.8	92.6	8.881	26.2	2155.6	86.1	11.316	7.923	0.876	1.2	-31.5
281	4121	8.83	34.783	2382.	2285.	*	511.6	31.2	2178.1	83.7	8.833	29.6	2178.2	77.2	13.586	7.867	0.786	-11.7	-45.5
282	4274	8.841	34.783	2379.	2272.	*	475.4	29.8	2154.2	88.8	8.862	27.4	2162.8	81.8	12.878	7.898	0.832	-9.3	-43.6
283	4427	8.851	34.785	2371.	2288.	*	531.8	32.4	2167.1	88.5	8.816	38.6	2175.7	73.7	14.566	7.837	0.758	-19.6	-54.6
285	4688	8.86	34.783	2381.	2273.	*	473.8	28.8	2154.8	89.4	8.864	27.1	2164.2	81.7	13.297	7.876	0.831	-15.4	-51.4
286	4782	8.88	34.781	2385.	2274.	*	464.6	28.3	2154.7	91.1	8.872	26.5	2164.3	83.1	13.174	7.888	0.846	-15.5	-52.8
287	4884	8.888	34.782	2385.	2258.	*	446.8	27.1	2146.5	94.3	9.888	25.4	2155.6	86.8	12.881	7.893	0.975	-14.3	-51.1
289	4985	8.89	34.782	2386.	2271.	*	452.5	27.5	2158.2	93.3	8.883	25.7	2168.4	94.9	13.898	7.883	0.963	-17.8	-54.3
218	5877	8.98	34.782	2385.	2271.	*	455.8	27.7	2158.5	92.7	8.888	25.9	2168.9	84.2	13.298	7.876	0.957	-19.2	-56.8
227	5185	8.92	34.782	2386.	2278.	*	449.9	27.3	2148.9	93.8	8.885	25.5	2159.5	85.8	13.258	7.878	0.865	-28.1	-58.2
233	5276	8.93	34.782	2387.	2269.	*	444.1	27.8	2147.1	94.9	8.898	25.1	2158.8	95.9	13.283	7.879	0.874	-28.8	-59.3

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 291 1 27 2 74 9536 56 9.8 S 175 35.8 W 5184
 291 2 27 2 74 1110 55 59.0 S 175 35.8 W 5885

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATH, T=INSITU*						CALC PARAMETERS P, T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (ARAG)		
				TALK (EQ/KG)	TIT (M/KG)	GC (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03= (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03= (M/KG)	CO3= (M/KG)	AM (E-9)	PH	ICP (E-6)				
281	2	5.94	34.158	2255.	2085.	*	**	345.6	17.1	1943.1	124.8	9.185	*	17.1	1943.1	124.8	6.325	0.185	1.249	78.7	58.8
282	32	6.94	34.158	2253.	2188.	*	**	315.6	15.6	1947.3	137.1	8.225	*	15.6	1947.4	137.8	5.968	0.224	1.372	98.7	59.9
283	63	6.93	34.158	2259.	2131.	*	**	373.9	18.3	1998.4	122.3	8.167	*	18.3	1998.5	122.2	6.858	0.164	1.224	75.7	54.9
284	33	6.95	34.164	2293.	2088.	*	**	296.9	14.6	1929.1	144.3	8.253	*	14.5	1929.4	144.1	5.631	0.249	1.443	97.4	76.5
285	123	5.18	34.163	2293.	2105.	*	**	319.7	16.1	1955.1	133.8	8.223	*	16.8	1955.4	133.6	6.852	0.218	1.338	86.7	55.6
286	153	5.65	34.284	2293.	2112.	*	**	326.5	16.7	1965.9	129.4	8.213	*	16.7	1966.3	129.8	6.287	9.287	1.294	81.9	58.8
288	234	4.84	34.197	2253.	2115.	*	**	321.9	17.8	1978.7	127.4	8.216	*	16.9	1971.2	126.9	6.212	8.287	1.272	79.1	57.9
289	274	4.68	34.176	2253.	2115.	*	**	326.8	17.3	1975.1	125.6	8.218	*	17.2	1975.7	125.1	6.311	8.288	1.253	77.8	55.5
218	355	4.38	34.155	2294.	2116.	*	**	316.5	17.8	1971.7	127.4	8.221	*	16.9	1972.5	126.7	5.284	8.287	1.268	77.9	56.3
225	456	3.91	34.131	2297.	2137.	*	**	348.3	19.8	2081.2	116.8	8.183	*	18.9	2082.2	115.9	6.831	0.166	1.168	56.4	44.5
226	557	3.928	34.213	2294.	2137.	*	**	485.5	22.1	2831.4	183.5	8.123	*	21.9	2832.5	182.6	7.989	9.182	1.029	82.3	38.1
227	788	3.33	34.288	2316.	2191.	*	**	437.5	24.3	2869.4	97.3	8.895	*	24.1	2878.8	96.1	9.562	8.867	0.966	44.6	22.8
228	518	2.73	34.375	2327.	2223.	*	**	581.2	28.5	2188.2	86.3	8.848	*	28.2	2118.8	84.8	9.895	8.885	0.855	31.6	8.5
238	1315	2.321	34.646	2351.	2247.	*	**	584.3	29.1	2131.2	86.7	8.848	*	29.5	2134.2	84.3	18.481	7.988	0.856	25.7	8.9
231	1818	2.16	34.783	2356.	2244.	*	**	475.4	27.6	2125.5	91.8	8.863	*	26.9	2129.1	88.8	18.286	7.991	0.895	26.5	8.8
232	2121	1.96	34.732	2365.	2258.	*	**	464.8	27.1	2138.1	92.7	8.873	*	26.4	2134.4	89.2	18.265	7.989	0.988	24.7	-1.9
233	2424	1.753	34.735	2367.	2258.	*	**	455.4	26.8	2129.4	93.8	8.888	*	25.9	2134.3	89.8	18.371	7.984	0.914	22.1	-5.5
181	2674	1.52	34.734	2368.	2248.	*	**	442.7	25.3	2126.2	95.5	8.891	*	25.3	2131.7	91.8	18.362	7.985	0.926	28.5	-8.8
234	2828	1.449	34.731	2371.	2248.	*	**	433.1	25.8	2125.8	97.2	8.899	*	24.8	2138.9	92.3	18.295	7.987	0.948	28.1	-9.9
182	2576	1.33	34.727	2368.	2251.	*	**	448.2	25.8	2138.4	53.8	8.885	*	25.7	2136.5	88.8	18.798	7.967	0.984	14.8	-14.7
183	3279	1.16	34.718	2375.	2255.	*	**	438.4	26.4	2133.8	95.6	8.894	*	25.2	2139.7	98.8	18.869	7.964	0.916	12.4	-18.2
184	3582	1.023	34.712	2372.	2268.	*	**	468.2	27.9	2148.9	91.3	9.874	*	26.5	2148.1	85.3	11.723	7.931	0.868	3.8	-27.9
185	3884	0.82	34.787	2375.	2268.	*	**	476.8	28.9	2158.3	88.7	8.861	*	27.5	2158.1	82.4	12.442	7.985	0.838	-3.2	-36.8
186	4126	0.88	34.784	2373.	2267.	*	**	478.1	29.1	2149.7	88.2	8.859	*	27.5	2158.8	91.5	12.886	7.893	0.829	-7.6	-41.5
187	4388	0.963	34.783	2373.	2258.	*	**	448.2	27.3	2137.8	92.9	8.884	*	25.7	2146.8	85.5	12.345	7.989	0.878	-7.2	-42.8
189	4589	0.85	34.781	2378.	2254.	*	**	422.2	25.7	2138.4	97.9	8.188	*	24.1	2148.8	89.9	11.873	7.925	0.914	-5.9	-41.5
129	4748	0.86	34.788	2374.	2261.	*	**	454.6	27.7	2141.5	91.9	9.879	*	26.8	2151.1	83.9	12.322	7.889	0.854	-14.1	-50.4
127	4891	0.87	34.788	2375.	2259.	*	**	445.9	27.2	2138.3	93.5	8.886	*	25.4	2148.3	85.3	12.863	7.891	0.867	-15.1	-52.8
125	4981	0.87	34.699	2373.	2259.	*	**	451.4	27.5	2139.2	92.4	8.881	*	25.7	2149.3	84.8	13.138	7.882	0.855	-17.3	-55.1
133	5882	0.86	34.696	2375.	2261.	*	**	451.8	27.5	2141.1	92.4	8.881	*	25.7	2151.4	83.9	13.255	7.878	0.853	-19.6	-57.3

CARBONATE REPORT

GEOSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
293	2	1 3 74	1436	52 48.8 S	178 5.8 W	5333
293	4	1 3 74	2226	52 49.3 S	178 18.1 W	5291
293	5	2 3 74	0601	52 56.0 S	179 11.0 W	5308
293	7	2 3 74	0817	52 58.8 S	178 12.8 W	5312

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS						*CALC PARAMETERS P=1ATM.T=INSITU*						CALC PARAMETERS P,T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG)	TIT TC02* (M/KG)	GC TC02 (M/KG)	*PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	*H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH	ICP (M/KG)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)
401	3	11.328	34.419	2301.	2838.	*	* 264.3	11.1	1844.2	182.6	8.389	* 11.1	1844.2	182.6	4.913	8.389	1.943	136.7	116.1
403	94	8.39	34.428	2302.	2879.	*	* 289.6	13.5	1989.6	156.8	8.267	* 13.4	1989.9	155.7	5.446	8.264	1.571	109.1	88.2
407	216	7.67	34.415	2296.	2853.	*	* 313.9	14.9	1934.7	143.3	8.234	* 14.9	1935.2	142.9	5.944	8.225	1.441	95.3	74.2
405	296	7.23	34.488	2293.	2884.	*	* 296.9	14.4	1923.8	146.7	8.253	* 14.3	1923.6	146.1	5.723	8.242	1.473	98.8	76.7
427	533	6.26	34.332	2296.	2114.	*	* 334.6	16.7	1967.1	138.1	8.286	* 16.6	1968.3	129.1	6.521	8.186	1.299	79.2	57.2
425	685	5.33	34.268	2301.	2138.	*	* 345.8	17.9	1988.5	123.6	8.191	* 17.7	1990.8	122.2	6.839	8.163	1.228	71.1	48.7
431	961	4.82	34.318	2308.	2135.	*	* 337.1	17.8	1992.4	124.8	8.288	* 17.5	1994.4	123.1	6.385	8.167	1.239	78.5	47.6
433	1112	3.524	34.342	2312.	2181.	*	* 422.6	23.3	2857.1	128.5	8.188	* 23.8	2859.4	98.6	8.686	8.265	8.993	43.8	28.2
681	1143	3.38	34.347	2315.	2154.	*	* 439.9	24.4	2872.2	97.3	8.893	* 24.8	2874.6	95.4	8.937	8.849	8.961	48.3	16.6
434	1263	2.95	34.381	2338.	2197.	*	* 413.6	23.3	2871.8	181.9	8.118	* 22.9	2874.4	99.7	8.539	8.869	1.885	43.5	19.5
683	1438	2.72	34.459	2338.	2218.	*	* 427.1	24.3	2886.3	99.4	8.185	* 23.8	2889.3	96.9	8.935	8.849	8.979	39.1	14.5
688	2178	2.27	34.687	2368.	2237.	*	* 443.1	25.6	2114.4	97.8	8.892	* 24.8	2118.9	93.3	9.857	8.866	8.948	28.3	1.5
689	2326	2.192	34.788	2355.	2231.	*	* 426.9	24.7	2186.6	99.7	8.186	* 23.9	2111.4	95.6	9.678	8.813	8.973	29.1	1.8
625	2621	1.98	34.732	2361.	2235.	*	* 438.8	25.1	2111.3	98.5	8.183	* 24.2	2116.8	94.8	18.816	7.999	8.957	24.3	-3.9
627	2516	1.74	34.736	2366.	2254.	*	* 471.5	27.9	2133.8	91.2	9.866	* 26.7	2148.9	86.4	11.212	7.958	8.888	13.3	-16.8
631	3589	1.32	34.723	2378.	2258.	*	* 441.9	26.4	2133.9	95.7	8.892	* 25.2	2143.1	89.7	11.149	7.953	8.913	9.3	-22.1
287	4775	0.92	34.782	2378.	2238.	*	* 388.4	23.1	2188.1	186.7	8.198	* 21.6	2118.5	97.9	18.962	7.058	8.995	-8.6	-37.8
225	5878	8.88	34.788	2375.	2244.	*	* 392.9	23.9	2116.1	184.8	9.137	* 22.3	2126.9	94.8	11.614	7.935	8.964	-8.6	-46.3
238	5271	8.985	34.699	2386.	2251.	*	* 394.7	24.8	2122.9	184.1	8.136	* 22.3	2134.2	94.5	11.834	7.927	8.962	-12.1	-58.6
233	5321	8.98	34.399	2368.	2251.	*	* 441.4	26.9	2132.3	93.9	8.889	* 25.8	2141.1	84.9	13.294	7.976	8.863	-22.6	-61.3

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
296	2	16 3 74	2215	44 59.0 S	166 42.0 W	5340
296	4	17 3 74	2623	45 2.0 S	166 48.3 W	5338
296	5	17 3 74	1439	45 1.1 S	166 58.2 W	5335
296	7	17 3 74	1615	45 1.8 S	166 58.8 W	5336

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU						DELTA	DELTA		
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/86)	TALK (EO/KG)	TIT (M/KG)	GC TC02* (M/KG)	GC TC02** (M/KG)	PC02 (ATH) (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AH (E-9)	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)	
			(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)				(E-6)	(E-6)	
681	26	13.09	34.713	2297.	2038.	*	*	292.9	11.7	1945.6	186.7	8.274	*	11.6	1845.7	180.6	5.331	8.273	1.838	134.7	114.0
682	38	12.47	34.696	2303.	2056.	*	*	305.2	12.4	1870.6	173.8	9.259	*	12.4	1870.7	172.9	5.532	8.257	1.758	126.8	106.1
684	82	11.47	34.941	2365.	2083.	*	*	337.6	14.1	1912.4	156.5	8.216	*	14.1	1912.5	156.3	6.098	8.215	1.601	110.8	89.2
685	100	10.73	34.886	2292.	2097.	*	*	397.1	17.8	1946.9	133.1	8.151	*	17.8	1947.1	132.9	7.129	8.147	1.358	86.3	65.4
687	192	9.98	34.767	2284.	2090.	*	*	388.6	16.8	1947.9	133.3	8.165	*	16.7	1948.3	133.8	6.958	8.159	1.355	85.3	64.7
688	242	9.56	34.721	2298.	2084.	*	*	321.9	14.4	1919.8	150.6	8.229	*	14.3	1919.6	150.1	6.817	8.221	1.528	102.5	91.3
610	375	8.60	34.598	2303.	2185.	*	*	359.8	16.5	1954.7	133.7	8.185	*	16.5	1955.3	133.0	6.744	8.171	1.349	84.4	62.9
611	449	8.05	34.525	2280.	2128.	*	*	413.1	19.4	1951.8	117.6	8.129	*	19.3	1951.9	116.8	7.723	8.112	1.182	67.6	45.9
613	647	7.40	34.491	2254.	2136.	*	*	489.8	19.7	1999.9	116.4	8.132	*	19.5	2001.3	115.2	7.818	8.187	1.165	64.6	42.3
614	745	6.79	34.428	2279.	2146.	*	*	464.8	22.8	2021.6	101.6	8.877	*	22.5	2023.0	100.4	8.938	8.849	1.813	48.9	26.4
616	941	5.747	34.395	2297.	2182.	*	*	511.0	26.8	2064.1	91.9	8.840	*	25.7	2065.9	90.4	9.922	8.883	8.912	37.3	14.2
617	1041	5.28	34.400	2303.	2170.	*	*	469.7	24.3	2056.3	97.4	8.872	*	24.8	2058.4	95.7	9.252	8.832	8.965	41.6	18.3
401	1184	4.618	34.410	2315.	2190.	*	2226	461.2	24.5	2068.6	97.5	8.879	*	24.1	2076.4	95.5	9.272	8.833	8.964	40.2	16.5
402	1207	3.984	34.411	2308.	2217.	*	*	685.9	32.9	2108.9	75.2	7.965	*	32.4	2111.3	73.3	12.184	7.914	8.740	17.1	-7.0
403	1305	3.579	34.432	2326.	2224.	*	2245	518.7	28.6	2109.1	86.4	8.830	*	28.0	2111.7	84.2	18.576	7.976	8.858	27.8	2.7
405	1508	3.853	34.497	2351.	2272.	*	2262	622.8	34.9	2162.8	74.3	7.959	*	34.2	2165.7	72.0	12.787	7.896	8.729	12.9	-12.8
400	1606	2.353	34.542	2355.	2291.	*	*	698.2	39.3	2184.3	67.4	7.913	*	38.6	2187.3	65.1	14.292	7.945	8.639	5.1	-20.2
405	1984	2.564	34.685	2374.	2253.	*	2297	456.3	26.1	2138.6	96.3	8.084	*	25.4	2134.6	93.0	9.861	8.086	8.943	36.0	3.8
411	2185	2.338	34.632	2379.	2254.	*	2299	585.5	34.0	2182.2	77.0	7.982	*	33.0	2186.4	74.5	12.739	7.895	8.757	9.5	-17.3
415	2395	2.205	34.668	2374.	2276.	*	2293	531.9	30.6	2161.1	84.1	8.822	*	29.8	2165.7	80.4	11.343	7.927	8.817	13.2	-14.3
416	2473	2.179	34.682	2367.	2276.	*	*	556.7	32.3	2163.4	80.4	8.802	*	31.3	2168.1	76.6	12.487	7.984	8.779	8.5	-19.2
417	2569	2.129	34.696	2367.	2257.	*	2291	485.0	28.2	2138.6	96.2	8.857	*	27.2	2143.8	86.0	11.089	7.955	8.875	16.9	-11.1
419	2784	1.976	34.709	2372.	2274.	*	2293	527.5	38.8	2159.1	94.1	8.824	*	29.7	2164.6	79.8	12.227	7.913	8.811	8.2	-28.5
420	3984	1.895	34.715	2371.	2271.	*	*	517.7	36.3	2159.7	95.0	8.831	*	29.2	2161.3	80.5	12.142	7.916	8.819	7.8	-21.3
421	2982	1.390	34.732	2361.	2249.	*	2267	472.4	27.7	2150.3	91.1	8.865	*	26.6	2156.2	86.2	11.383	7.947	8.877	12.3	-17.1
423	3231	1.579	34.731	2366.	2253.	*	2272	466.9	27.6	2133.7	91.7	8.070	*	26.4	2140.3	86.4	11.445	7.941	8.879	9.5	-20.8
202	3430	1.485	34.728	2365.	2255.	*	2280	473.1	28.1	2136.8	98.1	8.064	*	26.9	2143.7	84.4	11.852	7.926	8.859	4.8	-25.3
203	3690	1.362	34.724	2364.	2263.	*	*	582.1	36.8	2147.5	85.4	8.039	*	28.6	2154.7	79.7	12.728	7.895	8.811	-1.9	-33.6
205	3896	1.178	34.715	2365.	2249.	*	*	448.1	27.0	2128.9	93.2	8.894	*	25.6	2136.8	86.7	11.787	7.929	8.882	1.1	-31.8
206	4044	1.088	34.7	2358.	2276.	*	*	544.4	32.9	2158.5	78.7	9.805	*	31.3	2166.2	72.6	14.401	7.842	8.738	-15.1	-48.5
208	4443	8.962	34.786	2364.	2282.	*	2292	569.8	34.5	2171.6	75.9	7.988	*	32.7	2180.0	69.3	15.579	7.887	8.785	-24.1	-59.1
209	4598	8.345	34.784	2363.	2259.	*	*	483.2	29.3	2142.8	86.9	8.853	*	27.6	2151.9	79.5	13.556	7.868	8.889	-16.3	-51.9
217	5198	8.963	34.782	2366.	2254.	*	*	457.2	27.8	2135.1	91.1	8.875	*	25.9	2145.6	82.5	13.591	7.867	8.839	-22.8	-61.0
222	5313	8.977	34.7	2355.	2227.	*	*	486.8	24.7	2182.8	99.5	8.120	*	22.9	2113.9	98.2	12.367	7.988	8.917	-17.1	-55.7

1 FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSecs PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 381 1 21 3 74 1135 41 33.5 S 166 58.3 W 4838
 381 3 21 3 74 1838 41 36.5 S 166 55.3 W 4722

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH, T=INSITU*				CALC PARAMETERS P, T=INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARRG) (M/KG)		
				TALK (E-6)	TIT TC02* (M/KG)	GC TC02* (M/KG)	PCO2 (ATM) (E-6)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3- (M/KG)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3- (E-6)	PH			PH	ICP (E-6)
101	1	15.32	34.865	2327.	2036.	* 2943	* 282.4	18.5	1822.2	283.3	8.297	* 18.5	1822.2	283.3	5.844	8.297	2.878	157.6	137.1
102	32	14.45	34.816	2323.	2855.	*	* 303.7	11.6	1855.5	187.9	8.268	* 11.6	1855.6	187.8	5.413	8.267	1.917	141.8	121.1
103	112	11.58	34.937	2314.	2812.	* 2181	* 225.1	9.4	1795.1	287.5	8.366	* 9.4	1795.4	287.2	4.348	8.363	2.122	168.6	139.8
104	182	10.34	34.884	2313.	2116.	*	* 371.7	16.1	1958.9	141.8	8.188	* 16.1	1955.3	148.6	6.786	8.174	1.434	93.5	72.4
105	252	9.72	34.738	2309.	2898.	*	* 332.8	14.8	1934.8	149.2	8.219	* 14.7	1934.6	148.7	6.165	8.218	1.514	181.8	79.8
106	333	9.25	34.677	2306.	2184.	*	* 342.3	15.4	1945.1	143.5	8.287	* 15.4	1945.8	142.8	6.387	8.195	1.452	94.6	73.2
107	483	8.69	34.616	2311.	2126.	* 2158	* 378.3	17.8	1975.8	133.1	8.177	* 16.9	1976.7	132.4	6.892	8.162	1.343	93.6	62.8
108	476	9.88	34.539	2301.	2158.	*	* 442.4	28.8	2816.5	112.7	8.185	* 28.6	2817.5	111.9	8.184	8.887	1.133	62.6	48.8
109	551	7.53	34.476	2382.	2858.	* 2147	* 249.8	12.3	1877.4	168.6	8.319	* 11.8	1878.8	167.4	5.826	8.299	1.591	117.4	95.4
110	652	7.23	34.469	2384.	2165.	*	* 462.5	22.4	2836.9	185.7	8.885	* 22.2	2838.2	184.6	8.637	8.861	1.857	53.9	31.6
111	749	6.72	34.425	2297.	2182.	* 2164	* 531.9	28.2	2863.6	92.2	8.827	* 25.9	2865.8	91.8	18.826	7.999	8.919	39.5	17.8
113	971	5.55	34.483	2319.	2222.	* 2194	* 586.8	38.1	2189.8	83.8	7.988	* 29.7	2118.8	81.5	11.285	7.951	8.822	28.1	5.8
114	1095	5.84	34.438	2328.	2229.	*	* 682.1	31.4	2117.7	79.9	7.975	* 31.8	2119.7	78.3	11.678	7.933	8.798	23.8	8.3
115	1244	4.17	34.448	2335.	2212.	* 2237	* 466.3	25.1	2898.8	96.8	8.876	* 24.7	2892.5	94.8	9.384	8.828	8.957	38.9	15.8
116	1391	3.45	34.469	2353.	2257.	*	* 556.2	38.8	2143.4	82.8	8.886	* 38.2	2146.1	80.7	11.185	7.951	8.816	23.4	-8.9
117	1539	3.11	34.514	2359.	2236.	* 2277	* 527.8	29.6	2148.4	86.8	8.826	* 29.8	2143.5	83.6	18.821	7.966	8.946	24.9	8.1
301	1886	2.67	34.593	2389.	2299.	* 2298	* 577.9	32.9	2185.6	88.5	7.993	* 32.1	2189.1	77.8	11.976	7.922	8.789	16.6	-9.1
120	1981	2.41	34.614	2398.	2318.	*	* 655.3	37.7	2288.5	71.8	7.941	* 36.8	2212.2	69.8	13.744	7.862	8.788	6.8	-28.1
302	2083	2.42	34.616	2397.	2388.	* 2299	* 575.6	33.3	2194.5	88.2	7.992	* 32.4	2198.4	77.2	12.227	7.913	8.783	14.8	-12.3
304	2397	2.13	34.658	2485.	2315.	* 2383	* 572.2	33.2	2281.8	88.8	7.998	* 32.2	2285.6	77.2	12.533	7.982	8.784	9.9	-17.6
305	2496	2.86	34.673	2396.	2387.	* 2297	* 572.5	33.3	2193.5	88.1	7.996	* 32.3	2198.4	76.4	12.712	7.896	8.776	8.8	-19.8
307	2692	1.95	34.788	2398.	2381.	* 2285	* 538.5	31.5	2185.4	84.2	8.828	* 38.4	2198.7	88.8	12.232	7.913	8.913	9.4	-19.8
308	2792	1.91	34.712	2386.	2298.	* 2275	* 538.8	31.8	2172.6	84.3	8.824	* 29.9	2178.1	88.8	12.228	7.913	8.814	8.3	-28.5
310	2988	1.77	34.727	2383.	2277.	* 2272	* 497.3	29.3	2159.3	88.4	8.848	* 29.1	2165.3	83.6	11.769	7.929	8.851	9.7	-19.8
311	3888	1.714	34.731	2379.	2268.	* 2264	* 477.8	28.2	2148.9	88.9	8.863	* 27.8	2155.1	95.9	11.472	7.948	8.874	18.7	-19.1
313	3394	1.459	34.727	2377.	2281.	* 2262	* 526.5	31.3	2166.5	83.1	9.823	* 38.8	2173.1	77.9	12.959	7.887	8.793	-1.8	-31.9
314	3531	1.333	34.723	2377.	2281.	* 2274	* 523.7	31.3	2166.6	83.1	8.825	* 29.9	2173.5	77.6	13.892	7.883	8.798	-3.1	-34.6
316	3876	1.1	34.714	2374.	2293.	* 2263	* 579.8	34.9	2182.5	75.6	7.983	* 33.3	2189.8	69.9	14.927	7.926	8.711	-15.5	-48.3
317	4875	1.81	34.718	2371.	2287.	* 2272	* 563.3	34.1	2175.9	77.8	7.993	* 32.4	2183.7	78.9	14.851	7.828	8.721	-17.3	-58.8
319	4478	8.92	34.784	2382.	2285.	* 2274	* 513.6	31.2	2178.8	83.9	8.832	* 29.5	2178.8	76.7	14.874	7.852	8.781	-17.2	-52.3
328	4678	8.928	34.784	2385.	2292.	*	* 529.7	32.2	2178.8	81.8	8.828	* 30.3	2187.1	74.6	14.747	7.831	8.759	-22.3	-58.3

! FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEODESICS PACIFIC STATION CAST DATE LATITUDE LONGITUDE BOT DEPTH
 383 1 23 3 74 18 22.9 S 178 4.3 W 4741
 383 3 24 3 74 8236 38 19.5 S 178 2.8 W 4868
 383 5 24 3 74 8954 38 28.1 S 178 1.2 W 4878

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2**=TCO2-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*							CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC)	DELTA CO3= (ARAG)			
			SAL. (P/100)	TALK (EO/KG)	TIT (M/KG)	GC (M/KG)	TCO2* (M/KG)	TCO2** (M/KG)	PCO2 (ATH) (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AM			PH	ICP (E-6)	
581	2	18.21	34.938	2369.	2820.	*	2831	=	318.9	18.9	1885.9	283.2	8.258	*	18.9	1885.9	283.2	5.524	8.258	2.881	157.7	137.2
583	43	18.23	34.938	2317.	2869.	*	2869	=	395.7	13.5	1878.3	177.2	8.181	*	13.5	1878.4	177.1	6.611	8.188	1.814	131.3	118.8
584	62	14.83	35.833	2328.	2842.	*	2845	=	284.6	18.7	1831.8	199.4	8.293	*	18.7	1832.8	199.3	5.122	8.291	2.847	153.2	132.5
588	182	12.87	35.889	2328.	2891.	*	2891	=	348.4	13.6	1911.5	165.9	8.222	*	13.6	1911.8	165.6	6.849	8.210	1.702	119.2	98.4
587	152	11.97	35.838	2336.	2892.	*	2892	=	314.6	12.9	1987.7	171.3	8.258	*	12.9	1988.1	171.0	5.694	8.245	1.756	124.2	183.2
589	251	10.99	34.982	2325.	2123.	*	2188	=	375.7	16.8	1962.4	144.6	8.188	*	15.9	1963.8	144.1	6.749	8.171	1.474	96.6	75.4
513	596	7.76	34.497	2387.	2152.	*	2141	=	428.6	28.2	2816.7	115.1	9.119	*	28.1	2817.9	114.8	8.885	8.897	1.153	63.7	41.7
515	794	6.94	34.428	2299.	2162.	*	2147	=	461.1	22.5	2835.1	184.4	8.885	*	22.3	2836.7	183.8	8.819	8.855	1.848	51.2	28.6
517	998	6.881	34.398	2315.	2178.	*	2176	=	458.3	22.7	2858.8	184.6	8.894	*	22.4	2852.8	182.9	8.793	8.856	1.837	49.4	26.2
382	1143	5.141	34.389	2328.	2286.	*	2144	=	518.2	28.6	2887.6	91.8	8.842	*	26.1	2889.8	98.8	18.854	7.998	8.987	35.1	11.5
383	1243	4.435	34.393	2323.	2217.	*	2247	=	528.6	28.1	2181.4	87.5	8.827	*	27.7	2183.8	85.6	18.587	7.979	8.863	29.7	5.8
385	1448	3.578	34.453	2347.	2241.	*	2247	=	517.9	28.5	2124.6	87.9	8.834	*	28.8	2127.4	85.6	18.528	7.978	8.965	28.8	3.4
388	1539	3.245	34.492	2354.	2267.	*	2247	=	598.3	32.9	2155.8	78.3	7.982	*	32.3	2159.7	75.8	12.885	7.921	8.768	17.4	-7.5
389	1831	2.591	34.581	2398.	2298.	*	2247	=	518.3	29.8	2169.8	98.8	8.844	*	28.3	2172.6	87.8	18.663	7.972	8.882	25.6	-8.1
311	2838	2.467	34.687	2482.	2293.	*	2247	=	583.9	28.9	2173.6	98.5	8.849	*	28.1	2177.6	87.2	18.733	7.969	8.885	23.8	-2.5
314	2239	2.334	34.626	2393.	2291.	*	2247	=	525.8	38.3	2174.8	86.7	8.831	*	29.4	2178.4	93.2	11.425	7.942	8.844	17.6	-9.4
315	2341	2.267	34.634	2487.	2295.	*	2319	=	491.8	28.4	2174.3	92.3	8.859	*	27.5	2179.1	88.4	18.882	7.966	8.898	21.7	-5.6
318	2439	2.284	34.641	2414.	2334.	*	2247	=	621.2	36.8	2221.8	76.2	7.967	*	34.9	2226.5	72.6	13.528	7.869	8.737	4.9	-22.7
317	2548	2.138	34.648	2413.	2312.	*	2323	=	538.6	38.8	2194.6	86.6	8.829	*	29.8	2199.6	82.6	11.796	7.928	8.839	13.8	-14.2
318	2639	2.868	34.655	2413.	2389.	*	2247	=	518.6	38.2	2198.6	88.2	8.838	*	29.1	2195.9	83.9	11.659	7.933	8.853	14.1	-14.2
319	2738	2.839	34.674	2484.	2314.	*	2293	=	578.2	33.2	2288.8	88.8	7.998	*	32.1	2285.3	76.6	12.911	7.889	8.779	5.6	-23.8
181	3891	1.818	34.718	2378.	2279.	*	2247	=	521.9	38.7	2163.7	84.7	8.828	*	29.4	2169.7	79.8	12.448	7.985	8.812	4.7	-25.1
182	3194	1.781	34.728	2387.	2312.	*	2249	=	723.4	42.6	2285.9	63.5	7.895	*	41.1	2211.6	59.3	17.217	7.764	8.684	-17.8	-47.2
184	3397	1.577	34.729	2362.	2257.	*	2258	=	491.2	29.1	2148.5	87.4	8.849	*	27.8	2147.2	82.8	12.218	7.913	8.834	3.8	-27.9
187	3684	1.347	34.723	2372.	2279.	*	2247	=	534.4	32.8	2165.5	81.5	8.816	*	30.5	2172.7	75.8	13.561	7.868	8.772	-6.8	-38.9
110	4523	1.112	34.715	2379.	2277.	*	2254	=	458.0	30.8	2160.7	86.2	3.844	*	28.5	2163.7	79.8	13.182	7.883	8.812	-7.7	-41.8
111	4167	1.051	34.710	2382.	2267.	*	2247	=	454.8	27.5	2146.4	93.1	8.881	*	25.9	2154.9	86.1	12.167	7.915	8.876	-3.3	-37.2
112	4317	0.984	34.787	2388.	2268.	*	2247	=	461.7	28.8	2148.5	91.5	8.874	*	26.4	2157.3	84.3	12.554	7.981	8.859	-7.3	-41.8
114	4477	0.971	34.785	2384.	2259.	*	2247	=	562.6	34.1	2187.1	77.8	7.996	*	32.3	2195.6	71.1	15.338	7.814	8.723	-22.9	-58.8
122	4779	0.923	34.783	2381.	2264.	*	2247	=	445.2	27.1	2142.8	94.2	8.888	*	25.4	2152.6	86.1	12.678	7.997	8.876	-12.5	-48.9

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
305	1	26 3 74	1120	35 48.8 S	166 47.8 W	4886
305	2	26 3 74	1433	35 48.8 S	166 47.0 W	5275
305	3	26 3 74	1834	35 48.8 S	166 47.8 W	5275

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				*CALC PARAMETERS P=(ATH,T=INSITU*						CALC PARAMETERS P,T=INSITU				DELTA CO3= CO3- (M/KG) (E-6)	DELTA CO3= CO3- (M/KG) (E-6)		
		TEMP. (C)	SAL. (E-00)	TALK (E-6)	TIT TC02* (E-6)	* GC TC02* (E-6)	PC02 (ATH) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (E-6)	PH	* H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (E-6)	PH			PH	ICP (E-6)
101	1	20.34	35.314	2334.	2081.	* 1995	* 292.4	9.4	1758.1	233.5	9.296	* 9.4	1758.2	233.5	9.868	8.296	2.417	188.1	167.6
102	32	20.38	35.314	2340.	2087.	*	* 294.3	9.4	1763.9	233.7	8.295	* 9.4	1764.8	233.6	9.885	8.294	2.418	188.0	167.5
103	77	14.80	35.320	2340.	2036.	* 2040	* 268.2	18.8	1814.9	211.1	8.317	* 18.8	1815.1	218.9	4.846	8.315	2.184	164.8	144.1
104	122	13.32	35.223	2325.	2084.	*	* 336.8	13.3	1981.2	169.5	8.226	* 13.2	1981.5	169.3	9.997	8.222	1.748	122.7	181.9
105	172	12.65	35.151	2323.	2125.	* 2116	* 414.8	16.7	1965.5	142.8	8.147	* 16.7	1965.9	142.5	7.238	8.148	1.468	95.6	74.6
106	232	11.94	35.054	2316.	2087.	*	* 335.4	13.8	1911.9	161.3	9.223	* 13.8	1912.4	168.8	6.188	9.215	1.653	113.5	92.4
100	376	9.75	34.739	2380.	2185.	*	* 362.5	16.1	1949.8	139.1	8.186	* 16.8	1958.7	138.4	6.728	8.172	1.489	89.9	68.4
109	450	8.91	34.634	2295.	2187.	* 2121	* 362.7	16.5	1955.9	134.5	8.182	* 16.4	1956.9	133.7	6.827	8.166	1.357	94.6	52.9
112	746	6.86	34.434	2296.	2139.	*	* 482.4	19.7	2003.6	115.7	8.137	* 19.5	2005.2	114.3	7.789	8.109	1.154	62.8	48.4
113	860	6.165	34.397	2297.	2100.	* 2156	* 320.7	16.1	1957.6	134.3	8.221	* 15.9	1959.5	132.6	6.477	8.189	1.337	88.1	57.2
114	991	5.42	34.374	2307.	2284.	*	* 553.7	28.5	2089.7	85.8	8.088	* 28.2	2091.5	84.3	18.717	7.978	8.849	38.7	7.5
302	1144	4.41	34.397	2324.	2224.	* 2216	* 549.9	29.4	2118.2	84.4	8.818	* 29.8	2112.4	82.6	18.836	7.965	8.833	27.7	4.8
115	1190	4.26	34.398	2324.	2190.	* 2218	* 454.4	24.4	2075.4	98.2	8.885	* 24.8	2077.8	96.2	9.151	8.839	8.978	40.8	17.0
303	1294	3.63	34.425	2332.	2274.	*	* 739.4	48.7	2165.2	64.2	7.889	* 48.1	2171.5	62.5	14.559	7.837	8.631	6.1	-18.8
308	2036	2.31	34.622	2402.	2308.	* 2307	* 527.8	30.4	2192.7	86.9	8.831	* 29.6	2186.7	83.7	11.215	7.958	8.849	28.1	-6.2
309	2184	2.21	34.631	2402.	2324.	*	* 625.9	36.2	2212.9	74.9	7.962	* 35.3	2217.8	71.7	13.368	7.874	8.728	6.7	-28.2
204	2775	1.883	34.659	2415.	2311.	*	* 515.1	38.2	2192.7	88.1	8.848	* 29.1	2198.2	83.7	11.754	7.938	8.858	12.2	-16.6
207	3079	1.777	34.672	2410.	2383.	* 2380	* 581.6	29.5	2183.8	89.7	8.849	* 28.3	2198.8	84.7	11.828	7.927	8.868	3.7	-20.1
200	3179	1.749	34.679	2405.	2328.	*	* 578.2	33.6	2206.8	88.4	7.998	* 32.2	2212.2	75.6	13.471	7.871	8.769	-8.6	-38.7
210	3367	1.681	34.688	2406.	2296.	* 2385	* 488.7	28.9	2176.8	91.2	8.859	* 27.6	2182.8	85.6	11.889	7.925	8.871	7.1	-23.7
214	3617	1.681	34.718	2381.	2290.	* 2271	* 558.1	32.6	2176.7	88.7	8.887	* 31.1	2183.7	75.2	13.758	7.862	8.765	-6.5	-38.2
216	3760	1.581	34.719	2374.	2257.	* 2257	* 486.5	28.9	2149.3	88.8	8.854	* 27.5	2156.8	82.7	12.488	7.984	8.841	-1.8	-33.3
210	3963	1.322	34.718	2380.	2389.	* 2264	* 632.2	37.8	2208.2	71.8	7.958	* 36.1	2287.5	65.4	16.276	7.788	8.666	-21.8	-54.1
228	4360	1.877	34.718	2383.	2282.	* 2257	* 582.4	38.4	2163.8	85.9	8.841	* 28.7	2174.4	78.9	13.618	7.866	8.983	-13.3	-47.9
221	4562	1.828	34.787	2379.	2259.	*	* 437.8	26.5	2136.8	85.7	8.896	* 24.9	2146.2	87.9	12.199	7.914	8.894	-7.3	-42.8
222	4759	0.395	34.785	2382.	2286.	* 2292	* 518.0	31.4	2171.3	83.3	8.828	* 29.6	2188.6	75.8	14.984	7.936	8.771	-22.4	-58.7
224	5233	1.826	34.784	2395.	2262.	* 2265	* 484.3	24.5	2134.3	103.2	8.129	* 22.7	2145.5	93.8	12.088	7.921	8.954	-12.1	-58.4

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
306	1	27	3 74	280. 32 50.0 S	163 38.0 W	5622
306	4	28	3 74	3455 32 49.1 S	163 32.2 W	5364
306	6	28	3 74	1321 32 47.2 S	163 33.0 W	5707

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM.T=INSITU					CALC PARAMETERS P.T=INSITU			DELTA CO3- (M/KG)	DELTA CO3- (M/KG)			
				TALK (0/KG)	TIT (E-6)	GC TC02 (M/KG)	PC02 (M/KG)	M2CO3 (M/KG)	MCO3- (M/KG)	CO3- (M/KG)	PH	M2CO3 (M/KG)	MCO3- (M/KG)	CO3- (M/KG)			PH	PH	ICP (E-6)
601	12	22.194	35.298	2320.	1972.	* 1991	* 295.2	8.7	1715.1	248.2	0.308	* 8.7	1715.1	248.2	4.930	0.387	2.568	282.8	182.3
602	41	22.174	35.331	2327.	1993.	*	* 312.6	9.5	1748.6	234.9	0.276	* 9.5	1748.7	234.8	5.314	0.275	2.431	189.2	169.7
603	57	21.834	35.352	2320.	1983.	*	* 293.5	9.0	1732.8	242.8	0.297	* 9.0	1732.1	241.8	5.078	0.295	2.506	196.1	173.6
605	111	15.243	35.392	2337.	2051.	*	* 295.4	11.8	1848.4	199.6	0.200	* 18.9	1848.7	199.3	5.292	0.276	2.860	153.8	132.2
607	188	12.804	35.135	2310.	2077.	*	* 327.5	13.1	1894.6	169.3	0.234	* 13.1	1895.8	168.9	5.923	0.227	1.739	121.9	108.9
611	417	8.960	34.645	2301.	2124.	*	* 398.8	17.8	1977.9	128.3	0.155	* 17.7	1978.8	127.5	7.258	0.148	1.295	78.6	57.8
614	565	7.489	34.465	2300.	2135.	*	* 393.0	18.0	1995.6	120.6	0.148	* 18.7	1996.0	119.5	7.459	0.127	1.287	63.4	47.4
618	714	8.695	34.401	2299.	2127.	* 2147	* 363.5	17.9	1984.7	124.4	0.176	* 17.7	1986.3	123.8	7.896	0.149	1.248	71.8	49.3
618	838	5.983	34.368	2305.	2182.	*	* 294.1	14.9	1944.2	142.9	0.235	* 14.7	1946.2	141.1	5.978	0.223	1.421	88.8	66.1
620	937	5.394	34.384	2300.	2166.	*	* 420.1	22.8	2038.2	105.8	0.111	* 21.7	2040.2	104.1	8.487	0.075	1.049	51.8	27.9
621	1012	4.958	34.357	2300.	2190.	*	* 484.0	25.9	2071.6	92.5	0.051	* 25.5	2073.6	98.9	9.728	0.012	0.915	37.0	13.8
622	1085	4.592	34.358	2319.	2202.	*	* 487.8	25.9	2082.0	93.3	0.057	* 25.5	2085.0	91.5	9.655	0.015	0.922	37.8	13.6
601	1277	3.454	34.422	2335.	2250.	* 2235	* 624.6	34.6	2147.5	74.0	0.997	* 34.8	2149.8	72.2	12.416	0.908	0.728	15.9	-8.2
624	1348	3.384	34.437	2330.	2220.	*	* 581.1	27.9	2111.5	88.6	0.844	* 27.4	2114.1	86.5	10.194	0.992	0.873	29.6	5.4
603	1502	2.737	34.539	2300.	2200.	* 2200	* 538.5	30.1	2158.8	85.1	0.824	* 29.5	2155.9	82.6	10.925	0.962	0.836	23.5	-1.5
604	1716	2.533	34.579	2376.	2278.	*	* 588.3	29.1	2152.5	89.5	0.842	* 28.4	2155.9	85.7	10.617	0.974	0.809	25.3	-8.1
606	2015	2.223	34.625	2399.	2297.	*	* 524.4	30.3	2179.0	86.0	0.832	* 29.5	2183.8	83.6	11.166	0.952	0.949	28.3	-6.8
607	2161	2.122	34.635	2404.	2308.	* 2322	* 547.8	31.0	2192.4	83.8	0.816	* 30.9	2198.7	80.5	11.768	0.938	0.817	15.6	-11.1
609	2457	1.982	34.648	2423.	2319.	* 2333	* 519.7	30.3	2200.3	80.4	0.839	* 29.4	2205.2	84.4	11.455	0.941	0.858	16.5	-11.2
611	2743	1.878	34.659	2422.	2317.	* 2334	* 513.6	30.1	2198.8	88.9	0.843	* 29.0	2203.6	84.4	11.651	0.934	0.858	13.3	-15.3
614	3348	1.777	34.668	2414.	2331.	* 2331	* 598.1	35.2	2218.2	77.6	0.988	* 33.9	2224.1	73.1	13.988	0.857	0.743	-1.6	-31.3
621	3686	1.682	34.700	2394.	2289.	* 2299	* 500.9	29.7	2171.1	88.2	0.847	* 29.3	2178.3	82.4	12.512	0.903	0.838	8.0	-30.8
104	4876	1.331	34.714	2383.	2283.	* 2191	* 510.4	30.5	2167.2	85.3	0.836	* 29.8	2175.2	78.8	13.489	0.873	0.882	-9.1	-42.6
100	4568	1.374	34.709	2383.	2254.	* 2208	* 442.4	26.7	2141.9	95.3	0.892	* 25.1	2151.4	87.5	12.316	0.918	0.891	-7.7	-43.2
118	5470	1.093	34.700	2388.	2255.	* 2252	* 423.8	25.6	2138.9	98.5	0.108	* 23.7	2142.3	88.9	12.879	0.898	0.985	-20.9	-68.2

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 388 1 31 3 74 2218 29 59.5 S 158 29.9 W 5286
 388 3 1 4 74 0524 29 59.2 S 158 29.2 W 5288

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02==TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/88)	TALK (EQ/KG)	TIT (E-6)	GC TC02 (M/KG)	CALC PARAMETERS P=1ATM, T=INSITU				CALC PARAMETERS P, T=INSITU				DELTA CO3= (CALC)	DELTA CO3= (ARAG)			
							PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)			PH	PH	ICP (E-6)
181	11	23.35	35.358	2339.	1989.	* 1940	* 388.8	9.1	1733.4	246.5	8.285	* 9.1	1733.4	246.4	5.195	8.284	2.534	201.1	188.7
183	158	15.91	35.425	2358.	2855.	* 2863	* 294.8	18.7	1837.9	286.3	8.284	* 18.7	1838.3	286.8	5.258	8.279	2.139	159.4	138.6
184	234	14.22	35.228	2336.	2885.	* 2839	* 335.5	12.9	1895.4	176.8	8.232	* 12.8	1895.9	176.3	5.973	8.224	1.828	129.1	188.8
189	388	12.48	35.817	2327.	2189.	*	* 365.9	14.9	1939.8	155.1	8.194	* 14.8	1939.7	154.5	6.557	8.183	1.586	106.7	85.5
186	399	18.89	34.734	2315.	2128.	* 2899	* 372.5	16.3	1963.8	139.9	8.179	* 16.2	1964.7	139.1	6.847	8.169	1.416	98.4	68.9
187	499	8.15	34.524	2389.	2146.	*	* 422.3	19.8	2888.8	117.5	8.124	* 19.6	2889.8	116.6	7.348	8.185	1.188	67.1	45.2
189	697	6.61	34.393	2389.	2138.	*	* 375.4	18.5	1997.8	121.6	8.164	* 18.4	1999.3	120.3	7.277	8.138	1.213	69.2	46.8
118	828	5.85	34.339	2311.	2145.	* 2122	* 367.9	18.7	2889.3	121.8	8.178	* 18.5	2887.1	119.5	7.253	8.139	1.283	67.3	44.6
111	895	5.39	34.329	2311.	2182.	*	* 459.9	23.8	2958.4	99.9	8.882	* 23.5	2868.2	98.3	8.958	8.848	0.998	45.5	22.6
112	943	5.12	34.328	2316.	2173.	* 2188	* 415.7	21.7	2843.6	187.7	8.122	* 21.4	2845.6	186.8	8.214	8.895	1.867	52.8	29.7
113	1816	4.72	34.334	2315.	2198.	*	* 461.9	24.4	2868.1	97.5	8.879	* 24.1	2878.1	95.8	9.138	8.848	0.964	41.9	18.6
114	1888	4.25	34.363	2331.	2223.	* 2286	* 517.6	27.8	2186.4	88.7	8.835	* 27.4	2188.6	87.8	18.181	7.992	8.877	32.5	9.8
115	1185	3.71	34.399	2339.	2218.	*	* 464.8	25.5	2896.8	99.7	8.876	* 29.1	2899.2	93.7	7.253	8.139	1.283	67.3	44.6
118	1288	3.21	34.447	2352.	2287.	* 2228	* 697.8	38.9	2188.3	67.8	7.914	* 38.3	2182.6	66.1	13.789	7.863	8.667	9.8	-14.3
117	1376	3.88	34.486	2362.	2266.	*	* 549.5	38.9	2152.2	82.9	8.811	* 38.4	2154.8	88.8	11.858	7.956	8.617	23.6	-8.8
118	1515	2.79	34.544	2383.	2274.	* 2275	* 582.2	28.6	2155.2	98.2	8.849	* 28.8	2158.3	87.7	18.258	7.989	8.889	29.2	4.4
119	1656	2.49	34.583	2398.	2298.	*	* 536.7	38.8	2181.4	85.8	8.824	* 38.1	2184.7	83.2	11.818	7.958	8.844	23.4	-1.8
381	1779	2.34	34.689	2398.	2324.	*	* 646.4	37.2	2213.9	72.9	7.949	* 36.4	2217.2	78.3	13.278	7.877	8.714	9.3	-16.3
128	1792	2.36	34.683	2488.	2386.	* 2295	* 558.5	32.2	2191.1	82.8	8.888	* 31.4	2194.6	88.8	11.577	7.936	8.812	18.9	-6.8
382	1975	2.19	34.628	2419.	2348.	* 2313	* 627.2	36.3	2227.8	75.8	7.963	* 35.5	2231.6	73.8	13.852	7.884	8.741	18.8	-16.2
383	2172	2.89	34.648	2422.	2319.	*	* 523.2	38.5	2288.6	87.9	8.835	* 29.7	2285.8	84.4	11.258	7.949	8.857	19.4	-7.4
384	2368	1.99	34.648	2425.	2348.	* 2324	* 596.8	34.8	2225.4	78.8	7.984	* 33.8	2231.8	75.2	12.918	7.889	8.764	8.2	-19.2
389	2566	1.88	34.655	2435.	2333.	*	* 529.1	31.8	2214.3	87.7	8.833	* 38.8	2219.5	83.6	11.725	7.931	8.849	14.4	-13.7
386	2754	1.81	34.663	2432.	2324.	* 2322	* 584.9	29.7	2283.6	98.7	8.851	* 28.6	2289.3	86.2	11.454	7.941	8.876	14.8	-13.9
388	3188	1.71	34.679	2425.	2329.	* 2325	* 546.4	32.2	2212.4	84.4	8.818	* 38.9	2218.5	79.5	12.779	7.894	8.688	4.1	-25.8
389	3287	1.67	34.679	2427.	2328.	*	* 585.8	29.8	2288.1	98.1	8.849	* 28.6	2286.6	84.9	11.979	7.922	8.863	8.3	-21.9
311	3485	1.62	34.692	2412.	2387.	* 2388	* 586.6	38.8	2188.4	88.7	8.845	* 28.6	2195.2	83.1	12.318	7.989	8.846	4.1	-26.8
312	3583	1.57	34.699	2486.	2288.	* 2294	* 459.7	27.3	2165.4	95.3	8.882	* 26.8	2172.7	89.4	11.398	7.943	8.989	9.1	-22.2
314	3781	1.49	34.786	2481.	2298.	* 2277	* 588.1	38.2	2188.5	87.3	8.842	* 28.8	2187.8	81.4	12.774	7.894	8.828	-1.5	-33.5
315	3888	1.46	34.712	2395.	2268.	*	* 428.0	25.5	2142.6	188.8	8.188	* 24.2	2158.5	93.3	11.828	7.958	8.949	9.1	-23.3
316	3917	1.38	34.713	2388.	2281.	* 2272	* 488.2	29.2	2162.8	89.1	8.859	* 27.7	2178.6	82.7	12.639	7.898	8.842	-3.8	-35.9
717	4216	1.22	34.714	2398.	2282.	* 2278	* 482.1	29.8	2163.4	89.6	8.859	* 27.4	2171.9	82.7	12.898	7.891	8.842	-7.3	-41.3
318	4513	1.182	34.711	2394.	2263.	* 2268	* 418.8	24.8	2136.1	182.1	8.123	* 23.3	2145.7	94.1	11.386	7.944	8.957	-8.3	-35.6
319	4813	1.87	34.787	2399.	2287.	* 2264	* 588.8	38.2	2178.3	86.5	8.844	* 28.4	2179.9	78.8	14.899	7.851	8.881	-28.3	-56.7
328	5114	1.894	34.788	2393.	2284.	* 2268	* 477.7	29.9	2164.9	98.3	8.863	* 26.9	2175.2	81.9	13.962	7.858	8.833	-22.8	-59.7

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
310	1	3 4 74	2030	26 57.5 S	157 9.5 W	5393
310	3	3 4 74	1938	26 56.0 S	157 11.4 W	5458
310	5	3 4 74	1723	26 55.1 S	157 11.3 W	5442

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATM, T=INSITU							CALC PARAMETERS P, T=INSITU				DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ-KG)	TC02* (M/KG)	GC (M/KG)	TC02 (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	AM	PH	ICP (M/KG)	(CALC)	(ARAG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)
501	12	24.848	35.511	2378.	1989.	* 1974	* 296.1	9.4	1711.7	268.9	0.387	*	8.4	1711.7	268.9	4.942	0.326	2.795	223.6	203.3
515	198	18.838	35.515	2352.	2046.	* 1974	* 307.1	10.5	1828.9	214.6	0.275	*	18.5	1821.4	214.1	5.389	0.269	2.229	167.4	146.5
517	308	15.394	35.278	2336.	2075.	* 2096	* 336.1	12.4	1878.6	193.9	0.234	*	12.4	1879.4	193.3	5.373	0.224	1.895	135.7	114.5
518	401	12.365	35.205	2321.	2092.	*	* 342.3	13.9	1916.3	161.7	0.218	*	13.8	1917.3	160.9	5.259	0.203	1.651	112.4	90.9
519	501	9.489	34.628	2304.	2123.	* 2141	* 395.8	17.7	1977.6	125.7	0.153	*	17.5	1978.7	129.3	7.327	0.133	1.307	79.3	57.5
522	798	5.939	34.341	2307.	2147.	*	* 382.0	19.3	2018.3	117.4	0.156	*	19.1	2012.0	115.9	7.491	0.125	1.167	63.9	41.3
523	898	5.274	34.327	2307.	2176.	* 2183	* 451.0	23.4	2051.0	100.9	0.089	*	23.1	2053.6	99.3	9.824	0.054	0.999	46.5	23.5
301	933	5.268	34.327	2312.	2169.	* 2208	* 418.8	21.6	2039.7	107.7	0.119	*	21.3	2041.6	106.0	9.256	0.083	1.067	52.9	29.9
524	999	4.732	34.343	2319.	2192.	*	* 457.1	24.2	2069.1	98.7	0.083	*	23.8	2071.1	97.8	9.016	0.045	0.977	43.3	28.8
302	1065	4.977	34.335	2316.	2196.	*	* 481.9	25.3	2073.8	94.9	0.063	*	25.0	2077.0	93.3	9.463	0.024	0.939	39.5	16.2
303	1107	4.248	34.365	2328.	2285.	* 2160	* 464.4	25.0	2083.3	96.7	0.077	*	24.6	2085.6	94.8	9.248	0.034	0.955	40.1	16.6
305	1257	3.138	34.482	2361.	2252.	* 2236	* 582.5	20.1	2134.2	89.7	0.047	*	27.6	2136.9	87.5	10.155	0.009	0.885	30.5	6.2
306	1482	2.038	34.523	2370.	2275.	*	* 554.1	31.4	2160.9	82.7	0.088	*	30.0	2163.8	80.4	11.241	0.004	0.814	22.2	-2.4
307	1604	2.515	34.568	2381.	2279.	* 2308	* 523.5	30.8	2162.6	86.4	0.038	*	29.3	2165.9	83.9	10.882	0.007	0.858	24.6	-0.5
309	1854	2.388	34.812	2403.	2317.	* 2268	* 592.2	34.2	2204.0	78.9	0.084	*	33.4	2207.5	76.1	12.291	0.008	0.772	14.3	-11.5
310	1958	2.194	34.624	2408.	2332.	*	* 637.5	36.9	2228.9	74.1	0.095	*	36.8	2224.7	71.3	13.317	0.006	0.723	0.3	-17.9
311	2102	2.187	34.636	2412.	2309.	* 2298	* 522.6	30.4	2191.0	97.7	0.035	*	25.5	2195.2	84.3	11.178	0.002	0.856	20.0	-6.5
314	2339	1.978	34.547	2420.	2342.	* 2352	* 627.1	36.6	2230.1	73.3	0.063	*	35.6	2234.5	71.9	13.527	0.009	0.730	5.2	-22.1
318	2734	1.848	34.668	2429.	2322.	*	* 588.8	29.9	2201.9	90.2	0.047	*	28.8	2207.5	95.7	11.514	0.009	0.871	14.7	-13.9
320	2931	1.772	34.666	2436.	2325.	*	* 495.4	29.2	2203.4	92.4	0.055	*	28.8	2209.4	87.6	11.414	0.008	0.890	14.3	-15.0
102	3849	1.744	34.671	2438.	2318.	* 2291	* 463.3	27.3	2185.6	97.1	0.084	*	25.2	2192.0	91.9	10.074	0.004	0.934	17.2	-12.5
103	3136	1.715	34.672	2427.	2319.	*	* 581.8	29.6	2190.0	90.6	0.052	*	28.4	2205.2	85.4	11.022	0.007	0.860	9.7	-20.3
105	3274	1.687	34.676	2423.	2389.	*	* 480.0	20.3	2106.9	93.7	0.069	*	27.1	2193.7	88.2	11.513	0.009	0.897	18.9	-19.6
107	3363	1.668	34.678	2425.	2312.	* 2275	* 483.3	28.5	2190.3	93.2	0.066	*	27.3	2197.2	87.6	11.672	0.003	0.890	9.1	-21.7
108	3403	1.547	34.588	2420.	2324.	*	* 543.8	32.1	2207.7	84.2	0.019	*	30.7	2214.4	78.3	13.099	0.003	0.882	-8.2	-31.1
109	3494	1.594	34.688	2415.	2299.	* 2271	* 466.6	27.6	2173.2	95.1	0.078	*	26.3	2182.4	89.2	11.493	0.008	0.907	9.1	-22.2
111	3652	1.589	34.695	2406.	2280.	* 2266	* 434.4	25.0	2154.5	99.7	0.105	*	24.5	2162.2	93.3	10.973	0.008	0.949	10.9	-20.3
112	3749	1.476	34.699	2403.	2258.	*	* 581.3	29.0	2179.7	88.4	0.047	*	28.4	2197.3	82.4	12.668	0.008	0.830	-1.1	-33.3
115	3864	1.424	34.792	2408.	2278.	*	* 443.7	26.5	2154.2	97.4	0.095	*	25.1	2162.2	90.7	11.442	0.001	0.923	5.7	-27.0
116	3995	1.373	34.786	2404.	2285.	* 2257	* 453.2	27.1	2162.1	95.9	0.087	*	25.6	2170.3	89.1	11.800	0.008	0.906	2.2	-30.9
117	4113	1.315	34.789	2398.	2295.	*	* 494.3	29.6	2167.3	80.1	0.050	*	28.0	2175.6	81.4	13.020	0.005	0.829	-7.1	-40.7
118	4223	1.269	34.718	2388.	2273.	* 2236	* 459.4	27.5	2152.2	93.3	0.078	*	26.0	2160.8	85.2	12.300	0.008	0.877	-3.9	-37.9
120	4498	1.157	34.711	2389.	2275.	* 2224	* 461.8	27.9	2154.5	92.0	0.077	*	26.1	2163.6	95.3	12.663	0.007	0.860	-0.8	-43.3
121	4638	1.121	34.709	2398.	2293.	*	* 484.0	29.2	2164.7	89.1	0.050	*	27.4	2174.0	91.6	13.437	0.002	0.838	-14.7	-50.5
124	5094	1.127	34.710	2391.	2266.	* 2238	* 427.4	25.0	2141.5	90.8	0.107	*	24.0	2152.1	89.9	12.473	0.004	0.914	-13.6	-51.2

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	90T DEPTH
314	2	5 4 74	2258	23 44.8 S	153 37.8 W	4607
314	4	6 4 74	0618	23 43.6 S	153 33.8 W	4418
314	5	6 4 74	0884	23 43.7 S	153 38.5 W	4418

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS						*CALC PARAMETERS P=1ATM,T=INSITU*						CALC PARAMETERS P,T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (E0/KG)	TIT TC02** (E-6)	GC TC02* (E-6)	PCO2 (ATM) (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3* (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3* (E-6)	PH	PH	ICP (E-6)	DELTA CO3* (E-6)	DELTA CO3- (E-6)
482	42	26.83	35.722	2363.	1997.	*	* 331.4	9.1	1729.3	258.6	8.269	* 9.1	1729.4	258.5	5.398	8.268	2.786	213.1	192.7
483	179	19.38	35.649	2358.	2017.	* 2856	* 293.5	9.5	1774.4	233.1	8.295	* 9.5	1774.8	232.7	5.145	8.289	2.432	186.2	165.4
486	256	18.87	35.526	2334.	2043.	* 2868	* 325.8	11.1	1827.6	284.3	8.251	* 11.1	1828.3	283.7	5.719	8.243	2.121	156.6	133.6
487	308	16.54	35.397	2327.	2041.	*	* 389.7	11.1	1829.9	288.1	8.265	* 11.8	1838.6	199.3	5.568	8.254	2.869	151.8	138.7
508	349	15.19	35.248	2323.	2062.	*	* 328.5	12.2	1866.5	183.2	8.240	* 12.2	1867.4	182.4	5.914	8.228	1.885	134.5	113.3
589	398	14.11	35.177	2318.	2074.	*	* 341.3	13.1	1899.8	171.9	8.223	* 13.8	1889.9	171.8	6.186	8.289	1.764	122.7	101.3
518	547	9.35	34.999	2286.	2128.	* 2191	* 423.5	19.7	1991.9	116.4	8.128	* 19.5	1993.8	115.4	7.952	9.188	1.171	63.6	43.6
511	695	6.18	34.352	2287.	2171.	*	* 512.5	25.7	2852.9	92.4	8.838	* 25.5	2854.2	91.3	9.732	8.812	0.919	48.1	17.7
512	855	5.25	34.353	2387.	2182.	*	* 469.7	24.4	2868.2	97.5	8.873	* 24.1	2861.9	96.1	9.124	8.848	0.967	43.5	28.7
513	943	4.79	34.382	2312.	2191.	*	* 476.4	25.1	2878.6	95.3	8.866	* 24.8	2872.4	93.8	9.339	8.838	0.945	48.5	17.4
518	1784	2.31	34.613	2488.	2286.	*	* 468.8	26.5	2161.8	97.7	8.886	* 25.9	2165.5	94.7	9.645	8.816	0.961	33.6	9.8
201	1987	2.142	34.631	2428.	2388.	*	* 493.3	28.6	2186.8	92.6	8.859	* 27.9	2198.9	89.3	18.448	7.981	8.986	26.2	9.8
202	2093	2.083	34.637	2485.	2322.	*	* 681.4	35.8	2289.6	77.4	7.978	* 34.1	2213.6	74.3	12.772	7.894	8.754	18.1	-16.4
203	2283	2.814	34.642	2487.	2381.	* 2365	* 588.1	29.6	2182.3	89.1	8.845	* 28.8	2166.8	85.5	11.824	7.958	8.868	28.2	-6.7
206	2511	1.982	34.654	2483.	2294.	*	* 494.1	28.9	2174.6	98.5	8.855	* 28.8	2179.6	86.4	11.883	7.955	8.878	17.8	-18.1
207	2621	1.868	34.657	2485.	2327.	* 2318	* 619.3	36.3	2215.7	74.9	7.965	* 35.2	2228.7	71.1	13.828	7.859	8.723	1.4	-26.9
208	2737	1.889	34.662	2488.	2316.	*	* 558.2	32.8	2281.3	81.9	8.887	* 31.7	2286.7	77.7	12.669	7.897	8.789	6.6	-22.8
209	2852	1.765	34.667	2417.	2388.	* 2344	* 496.8	29.2	2188.8	98.8	8.855	* 28.1	2193.8	86.2	11.432	7.942	8.676	13.8	-15.3
218	2965	1.731	34.678	2489.	2326.	*	* 595.8	35.1	2213.4	77.5	7.988	* 33.8	2219.1	73.1	13.767	7.861	8.743	-8.6	-38.8
214	3315	1.612	34.688	2398.	2328.	* 2339	* 611.4	36.2	2289.1	74.7	7.968	* 34.8	2215.3	69.9	14.665	7.834	8.711	-8.8	-38.6
215	3422	1.573	34.683	2488.	2314.	*	* 576.8	34.2	2281.1	78.7	7.992	* 32.7	2287.7	73.6	13.995	7.854	8.748	-5.7	-36.7
216	3547	1.533	34.687	2483.	2294.	* 2296	* 488.1	29.8	2174.5	98.5	8.858	* 27.6	2181.7	94.7	12.189	7.917	8.861	3.8	-27.6
219	3889	1.393	34.696	2481.	2288.	*	* 446.3	26.6	2156.5	96.9	8.893	* 25.2	2164.6	98.2	11.529	7.359	8.917	4.8	-29.8
224	4565	1.269	34.784	2381.	2288.	* 2388	* 535.3	32.1	2174.2	81.7	8.816	* 38.3	2183.8	74.7	14.784	7.353	8.758	-28.4	-55.8

CARBONATE REPORT

SEDCOCS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 316 1 19 4 74 0384 19 51.9 S 125 36.0 W 4120
 316 2 19 4 74 0618 19 51.9 S 126 35.9 W 4121

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02**TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*						CALC PARAMETERS P,T=INSITU				DELTA CO3= (CALC)	DELTA CO3= (ARAG)		
		TEMP. (C)	SAL. (E-6)	TALK (M/KG)	TC02* (M/KG)	GC (M/KG)	TC02** (E-6)	PC02 (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)			PH	ICP (E-6)
201	2	25.45	36.545	2421.	2838.	* 2841	* 324.8	9.8	1758.5	278.4	8.279	* 9.8	1758.5	278.4	5.257	8.279	2.897	225.5	285.2
204	17	25.39	36.540	2418.	2836.	*	* 324.6	9.1	1757.3	269.7	8.279	* 9.1	1757.3	269.6	5.266	8.278	2.988	224.6	284.3
207	51	25.42	36.625	2429.	2943.	* 2842	* 323.7	9.8	1761.3	272.7	8.291	* 9.8	1761.4	272.6	5.253	8.298	2.326	227.3	287.8
210	101	25.24	36.659	2423.	2846.	* 2858	* 332.2	9.3	1778.5	266.2	9.271	* 9.3	1778.8	265.8	5.399	9.268	2.358	228.4	288.8
212	126	24.34	36.516	2428.	2852.	* 2842	* 338.8	9.5	1782.5	268.8	8.278	* 9.5	1792.9	259.7	5.416	8.266	2.788	213.9	193.5
213	151	23.97	36.469	2383.	2893.	* 2846	* 449.7	13.8	1872.6	287.4	8.156	* 13.8	1872.9	287.1	7.859	8.151	2.214	161.2	140.6
215	301	16.24	35.886	2322.	2859.	* 2868	* 338.8	12.2	1861.4	185.4	8.232	* 12.2	1862.1	184.8	5.998	8.222	1.988	137.2	116.1
216	400	11.163	34.548	2298.	2125.	* 2138	* 436.3	18.5	1979.7	126.9	8.121	* 18.4	1988.5	126.1	7.834	8.186	1.277	77.5	56.8
218	599	6.139	34.355	2299.	2184.	*	* 519.1	25.1	2865.8	92.1	8.835	* 25.9	2867.8	91.1	9.718	8.812	8.918	48.7	18.5
219	698	5.214	34.342	2382.	2192.	* 2286	* 519.9	27.8	2875.7	89.3	9.832	* 26.8	2877.8	88.2	9.893	8.885	8.988	36.9	14.5
221	946	4.42	34.584	2358.	2267.	* 2271	* 636.1	34.8	2156.6	76.5	7.956	* 33.6	2159.3	75.1	12.861	7.919	8.768	21.8	-1.3
181	952	4.416	34.588	2349.	2289.	*	* 758.1	48.5	2182.9	65.6	7.885	* 48.8	2184.6	64.3	14.225	7.847	8.651	11.8	-12.2
182	1188	3.981	34.527	2358.	2296.	* 2294	* 736.1	48.8	2189.3	66.7	7.896	* 39.5	2191.3	65.2	14.858	7.852	8.668	18.5	-13.8
183	1247	3.515	34.546	2368.	2286.	*	* 625.7	34.5	2175.2	76.2	7.962	* 34.8	2177.6	74.4	12.248	7.912	8.754	18.4	-5.5
184	1481	3.118	34.564	2378.	2382.	* 2318	* 648.4	36.3	2192.2	73.5	7.947	* 35.7	2194.8	71.5	12.841	7.891	8.725	14.1	-18.3
185	1558	2.753	34.591	2388.	2312.	*	* 643.5	36.5	2281.8	73.7	7.958	* 35.8	2284.7	71.5	12.928	7.888	8.725	12.7	-12.2
186	1697	2.468	34.687	2399.	2295.	*	* 521.4	29.9	2177.2	87.9	8.835	* 29.2	2188.6	85.2	18.759	7.968	8.864	24.9	-8.4
187	1847	2.257	34.625	2488.	2317.	*	* 683.3	34.9	2284.9	77.3	7.976	* 34.1	2288.4	74.5	12.528	7.982	8.756	12.9	-13.8
188	1995	2.895	34.644	2487.	2324.	* 2325	* 682.5	35.8	2211.5	77.4	7.977	* 34.2	2215.4	74.5	12.668	7.897	8.756	11.3	-15.8
189	2145	1.984	34.655	2411.	2318.	*	* 558.7	32.6	2282.9	82.5	9.888	* 31.7	2287.1	79.2	11.964	7.922	8.884	14.4	-12.3
112	2593	1.821	34.671	2418.	2315.	* 2322	* 519.4	38.5	2196.7	87.8	8.837	* 29.5	2281.9	83.6	11.642	7.934	8.958	14.2	-14.8
116	2988	1.736	34.677	2424.	2324.	* 2338	* 531.1	31.3	2286.3	86.4	8.829	* 38.1	2212.1	81.8	12.289	7.913	8.831	9.9	-28.3
117	3849	1.782	34.688	2419.	2318.	*	* 496.1	29.3	2189.8	98.9	8.855	* 29.1	2196.8	85.9	11.644	7.934	8.874	11.3	-19.4
118	3199	1.679	34.688	2423.	2384.	* 2318	* 463.5	27.4	2188.3	96.4	8.882	* 25.2	2186.9	98.9	11.878	7.956	8.924	14.4	-15.8
119	3345	1.551	34.634	2426.	2314.	*	* 486.7	28.3	2192.6	92.7	8.864	* 27.5	2199.4	87.1	11.728	7.931	8.885	8.8	-21.3
120	3494	1.621	34.687	2425.	2381.	* 2338	* 447.7	26.5	2175.4	99.1	8.896	* 25.2	2182.7	93.1	11.813	7.958	8.946	12.9	-18.3
122	3793	1.588	34.689	2421.	2388.	* 2328	* 488.8	28.5	2186.4	93.1	8.867	* 27.1	2194.2	86.7	12.119	7.917	8.892	2.7	-29.6
123	3941	1.585	34.689	2422.	2314.	* 2318	* 498.8	29.5	2194.1	98.4	8.854	* 28.8	2282.8	84.8	12.691	7.897	8.954	-2.8	-34.9
124	4088	1.596	34.693	2421.	2311.	* 2332	* 491.5	29.1	2198.4	91.5	8.859	* 27.6	2198.7	84.8	12.711	7.896	8.862	-3.2	-36.7

CARBONATE REPORT

GEOSSECS PACIFIC STATION EAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 317 2 20 4 74 1740 23 37.3 S 127 11.3 W 3509
 317 4 21 4 74 0100 23 35.1 S 127 12.5 W 3404

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/00)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM.T=INSITU*							CALC PARAMETERS P.T=INSITU			DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRAG) (M/KG)	
				TALK (E-6)	TC02* (M/KG) (E-6)	GC TC02* (M/KG) (E-6)	PCO2 (ATM) (M/KG) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3* (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH (E-9)	ICP (E-6)			
401	3	25.94	36.557	2427.	2036.	* 2043	* 322.2	8.9	1759.9	276.3	8.284	* 8.9	1759.9	276.3	5.201	8.294	2.960	231.3	211.1
402	52	25.93	36.555	2427.	2036.	*	* 322.3	8.9	1759.8	276.3	8.284	* 8.9	1751.8	276.2	5.221	8.282	2.968	231.8	218.7
403	103	25.92	36.550	2406.	2050.	* 2041	* 368.2	18.1	1797.6	252.3	8.235	* 18.1	1787.8	252.8	5.865	8.232	2.708	206.5	186.1
404	122	24.27	36.192	2481.	2017.	*	* 299.5	8.6	1737.9	279.5	8.303	* 9.6	1738.3	278.1	5.824	8.299	2.966	224.3	203.8
405	152	22.56	36.009	2305.	2029.	* 2041	* 305.8	9.3	1769.1	259.6	8.287	* 9.3	1769.5	250.2	5.226	8.282	2.641	204.1	183.5
406	201	20.21	35.695	2353.	2035.	* 2040	* 320.7	18.3	1801.1	223.6	8.265	* 18.3	1801.6	223.1	5.523	8.258	2.335	176.5	155.7
407	271	19.00	35.406	2339.	2047.	*	* 325.8	11.1	1830.5	205.4	8.253	* 11.8	1831.2	204.8	5.699	8.244	2.125	157.6	136.6
408	349	15.67	35.153	2326.	2056.	* 2073	* 320.5	11.9	1854.7	189.5	8.251	* 11.7	1855.6	188.7	5.765	8.239	1.945	140.9	119.6
409	400	13.75	34.917	2311.	2193.	*	* 404.1	15.7	1937.9	149.4	8.159	* 15.6	1938.7	148.6	7.167	8.145	1.521	180.2	79.3
410	449	11.26	34.644	2302.	2112.	* 2117	* 397.5	16.8	1950.2	137.1	8.157	* 16.7	1959.2	136.2	7.239	8.140	1.383	87.3	65.7
411	480	9.70	34.593	2296.	2126.	* 2138	* 417.8	18.5	1983.1	124.3	8.133	* 18.4	1984.2	123.4	7.678	8.115	1.248	74.1	52.3
413	596	7.00	34.358	2294.	2155.	* 2171	* 454.8	22.1	2027.4	105.5	8.090	* 22.8	2028.6	104.5	8.555	8.069	1.052	54.1	32.0
414	666	6.243	34.338	2294.	2150.	* 2165	* 448.7	22.5	2032.8	103.5	8.092	* 22.3	2033.4	102.4	8.573	8.067	1.038	51.4	29.1
416	843	4.917	34.312	2310.	2195.	* 2198	* 497.9	26.1	2076.8	92.1	8.049	* 25.8	2078.4	90.7	9.628	8.016	0.913	38.3	15.5
417	991	4.126	34.378	2322.	2232.	*	* 584.4	31.6	2121.3	79.2	7.984	* 31.2	2123.1	77.7	11.346	7.945	0.793	24.0	0.7
419	1200	3.009	34.538	2370.	2293.	*	* 591.1	33.2	2171.1	79.6	7.983	* 32.7	2173.6	76.7	11.704	7.932	0.776	28.3	-3.9
420	1437	2.600	34.563	2300.	2294.	* 2294	* 592.6	33.7	2181.9	78.4	7.982	* 33.1	2184.7	76.2	11.890	7.925	0.772	18.4	-6.1
421	1507	2.41	34.595	2399.	2300.	*	* 612.2	35.2	2196.7	76.1	7.969	* 34.5	2199.7	73.8	12.425	7.906	0.748	14.6	-10.5
422	1735	2.245	34.614	2395.	2314.	* 2317	* 618.2	35.3	2202.6	76.2	7.971	* 34.5	2205.9	73.6	12.551	7.991	0.747	13.0	-12.5
204	2054	1.997	34.646	2400.	2347.	* 2323	* 751.6	43.9	2239.3	63.4	7.886	* 42.9	2243.4	60.7	15.761	7.802	0.616	-3.1	-29.6
205	2201	1.936	34.653	2410.	2373.	* 2326	* 855.8	50.0	2266.0	57.0	7.935	* 48.9	2269.0	54.3	18.020	7.744	0.551	-11.0	-37.9
206	2354	1.384	34.668	2417.	2312.	* 2328	* 513.8	39.1	2193.1	80.0	8.042	* 29.1	2197.9	85.0	11.252	7.949	0.864	18.1	-9.3
200	2650	1.795	34.672	2422.	2337.	* 2330	* 592.5	34.0	2223.4	70.9	7.985	* 33.7	2228.5	74.8	13.228	7.979	0.760	4.7	-23.7
209	2903	1.733	34.574	2420.	2322.	*	* 537.4	31.7	2205.1	95.3	8.024	* 38.5	2218.6	80.8	12.253	7.912	0.822	9.8	-19.9
211	3109	1.707	34.676	2410.	2327.	*	* 595.1	35.1	2214.4	77.5	7.981	* 33.8	2220.4	72.9	13.937	7.856	0.741	-2.5	-32.4
212	3259	1.708	34.676	2417.	2314.	* 2319	* 517.0	38.5	2195.7	37.0	8.038	* 29.2	2202.3	82.5	12.346	7.908	0.939	5.4	-25.1
216	3411	1.714	34.678	2410.	2329.	* 2321	* 567.0	33.5	2213.4	81.1	8.081	* 32.1	2220.0	75.9	13.666	7.864	0.772	-3.1	-34.1

CARBONATE REPORT

BOESEC'S PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 319 1 23 4 74 1113 28 38.8 3 127 47.1 W 4042
 319 2 23 4 74 1531 28 38.8 S 127 48.9 W 4128

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/100)	TALK (MG/KG)	TIT * GC		CALC PARAMETERS P-LATH.T=INSITU*				CALC PARAMETERS P.T=INSITU				DELTA CO3= (MG/KG)	DELTA CO3= (ARAG)			
					TC02 (E-6)	TC02 (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)			PH	PH	ICP (E-6)
282	18	23.14	35.671	2355.	2808.	* 2818	* 386.8	9.1	1741.1	249.8	8.287	* 9.1	1741.1	249.8	5.163	8.287	2.612	284.5	184.1
286	53	23.11	35.668	2358.	2802.	* 2802	* 314.4	9.3	1747.8	244.9	8.278	* 9.3	1747.9	244.7	5.298	8.277	2.559	199.2	178.7
289	81	18.88	35.379	2328.	2804.	* 2820	* 284.3	9.3	1768.3	226.2	8.381	* 9.5	1759.5	226.8	5.831	8.298	2.344	188.8	159.4
212	181	15.32	35.141	2318.	2842.	* 2842	* 384.3	11.3	1837.8	193.8	8.268	* 11.2	1838.2	192.5	5.476	8.262	1.983	145.7	124.8
213	262	13.62	35.814	2314.	2871.	* 2889	* 333.8	13.8	1887.8	171.8	8.238	* 13.8	1887.6	178.4	6.811	8.221	1.749	123.8	181.9
214	321	11.46	34.778	2385.	2892.	* 2186	* 353.1	14.8	1926.1	151.1	8.282	* 14.7	1926.8	158.4	6.454	8.198	1.534	182.4	81.1
215	391	8.58	34.462	2291.	2138.	* 2138	* 419.3	19.4	1992.2	118.5	8.126	* 19.2	1993.8	117.8	7.737	8.111	1.198	59.1	47.5
216	461	7.41	34.489	2289.	2126.	* 2141	* 393.4	18.9	1988.8	119.1	8.146	* 18.8	1988.9	118.3	7.432	8.129	1.193	59.8	47.2
217	571	6.52	34.357	2381.	2148.	* 2148	* 487.8	28.2	2814.4	113.4	8.131	* 28.1	2815.6	112.4	7.764	8.118	1.132	52.2	48.1
218	651	6.87	34.328	2291.	2149.	* 2147	* 426.7	21.5	2820.8	186.7	8.111	* 21.3	2822.1	185.6	8.285	8.886	1.862	54.7	32.4
219	749	5.44	34.382	2294.	2148.	* 2148	* 486.6	21.8	2818.8	189.8	8.128	* 28.7	2819.6	187.7	7.962	8.899	1.883	56.8	33.5
220	846	4.93	34.383	2296.	2184.	* 2188	* 584.3	26.5	2867.4	98.2	8.842	* 26.2	2869.8	88.8	5.796	8.889	8.393	36.3	13.5
221	945	4.37	34.329	2388.	2285.	* 2285	* 538.8	28.4	2891.8	85.6	8.821	* 28.1	2892.8	84.1	18.368	7.984	8.846	38.8	7.6
181	998	4.211	34.341	2385.	2215.	* 2286	* 588.1	31.2	2185.8	78.8	7.985	* 38.8	2186.8	77.3	11.332	7.946	8.779	23.6	8.4
222	1843	3.98	34.375	2321.	2215.	* 2229	* 514.9	28.8	2899.6	87.4	8.833	* 27.7	2181.6	85.7	18.171	7.993	8.864	31.5	8.1
182	1898	3.744	34.396	2323.	2238.	* 2238	* 599.8	32.8	2128.5	76.7	7.973	* 32.4	2138.5	75.1	11.758	7.938	8.757	28.5	-3.1
183	1186	3.343	34.453	2339.	2244.	* 2277	* 553.1	38.7	2131.3	82.8	8.886	* 38.3	2133.6	88.2	18.996	7.959	8.318	24.7	8.9
184	1288	3.838	34.494	2349.	2263.	* 2271	* 588.3	33.8	2152.3	77.6	7.981	* 32.5	2154.8	75.7	11.745	7.938	8.766	19.3	-4.8
185	1389	2.784	34.531	2359.	2269.	* 2269	* 569.9	32.3	2156.8	79.9	7.995	* 31.7	2159.5	77.8	11.498	7.939	8.797	28.4	-4.8
186	1536	2.516	34.573	2373.	2281.	* 2386	* 361.1	32.1	2167.7	81.2	8.882	* 31.5	2178.7	78.9	11.468	7.941	8.799	28.1	-4.7
187	1686	2.351	34.596	2388.	2297.	* 2316	* 567.8	32.7	2183.3	81.8	7.999	* 32.8	2186.6	78.5	11.685	7.932	8.796	18.3	-7.8
188	1835	2.176	34.622	2391.	2382.	* 2388	* 572.7	33.2	2188.8	88.8	7.995	* 32.4	2192.3	77.3	11.967	7.922	8.794	19.7	-18.1
189	1984	2.869	34.634	2398.	2299.	* 2299	* 532.4	31.8	2182.8	85.2	8.825	* 38.2	2186.7	82.1	11.319	7.946	8.834	19.8	-7.2
111	2134	1.991	34.642	2486.	2387.	* 2387	* 533.8	31.2	2198.4	85.5	8.825	* 38.3	2194.6	82.1	11.477	7.948	8.834	17.5	-9.2
112	2232	1.935	34.649	2486.	2381.	* 2329	* 518.8	29.8	2182.7	88.5	8.843	* 29.9	2187.1	84.9	11.188	7.954	8.862	19.3	-7.7
119	2448	1.539	34.657	2485.	2386.	* 2328	* 526.9	38.9	2189.1	85.9	8.838	* 29.9	2194.8	82.1	11.684	7.932	8.854	14.2	-13.4
116	2586	1.779	34.664	2487.	2318.	* 2318	* 561.7	33.8	2281.6	81.4	8.884	* 32.8	2286.6	77.4	12.576	7.988	8.797	8.8	-28.1
117	2733	1.723	34.658	2489.	2289.	* 2378	* 457.8	26.9	2165.5	96.6	8.886	* 25.9	2171.2	91.9	18.521	7.978	8.934	28.8	-7.8
118	2888	1.675	34.677	2487.	2314.	* 2314	* 551.5	32.6	2199.8	82.4	8.811	* 31.4	2284.7	77.9	12.728	7.896	8.792	5.2	-23.9
119	3838	1.631	34.678	2487.	2318.	* 2329	* 534.8	31.6	2194.8	94.4	8.823	* 38.4	2288.8	79.6	12.537	7.982	8.818	5.2	-24.5
128	3229	1.993	34.682	2487.	2388.	* 2312	* 497.8	29.4	2181.8	89.5	8.852	* 28.2	2187.5	84.3	11.932	7.923	8.857	7.4	-22.9
122	3528	1.962	34.687	2488.	2389.	* 2325	* 525.9	31.2	2192.4	85.4	8.829	* 29.8	2199.4	79.8	12.931	7.888	8.812	-8.8	-32.2
123	3679	1.564	34.688	2484.	2297.	* 2388	* 495.8	29.4	2178.1	89.5	8.852	* 28.8	2195.5	83.5	12.428	7.986	8.849	1.8	-31.8
124	3993	1.588	34.689	2485.	2293.	* 2384	* 479.2	28.4	2172.5	92.1	8.866	* 26.9	2188.6	85.5	12.387	7.987	8.869	-1.2	-34.3

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 328 2 25 4 74 2142 33 29.9 S 129 24.2 W 4141
 328 5 25 4 74 2026 33 28.7 S 129 24.6 W 4166

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (E0/KG)	TIT (E-6)	GC		CALC PARAMETERS P=1ATH,T=INSITU					CALC PARAMETERS P,T=INSITU					DELTA C03= (CALC)	DELTA C03= (ARAG)			
						TC02*	TC02**	PC02 (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	C03= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	C03= (M/KG)	AH (E-9)	PH			ICP (E-6)	(E-6)	(E-6)
501	2	19.65	34.648	2307.	2025.	*	2019	*	347.3	11.4	1813.8	199.8	8.232	*	11.4	1813.8	199.8	5.859	8.232	2.029	154.3	133.8
502	37	20.09	34.841	2311.	2011.	*	2071	*	327.4	10.6	1788.6	211.8	8.254	*	10.6	1788.7	211.7	5.589	8.253	2.162	166.8	145.5
503	52	20.84	34.855	2313.	2002.	*	2019	*	318.3	10.1	1773.0	219.9	8.273	*	10.0	1773.2	219.8	5.353	8.271	2.236	173.8	152.5
504	73	16.74	34.675	2293.	2038.	*	2031	*	348.2	12.4	1845.3	188.3	8.221	*	12.4	1845.5	188.1	6.858	9.218	1.831	134.1	113.4
505	97	14.93	34.757	2310.	2015.	*	2031	*	287.4	10.1	1799.7	205.2	8.313	*	10.0	1800.8	205.0	4.897	8.318	2.009	158.7	137.9
506	123	14.24	34.734	2305.	2022.	*	2033	*	274.1	10.5	1814.5	196.9	8.302	*	10.5	1814.9	196.6	5.834	8.298	2.002	158.1	129.3
507	173	12.62	34.529	2296.	2076.	*	2071	*	352.5	14.2	1985.8	155.9	8.285	*	14.2	1986.2	155.6	6.327	8.199	1.579	188.6	97.7
508	223	11.47	34.532	2301.	2090.	*	2093	*	354.9	14.9	1925.2	158.8	8.280	*	14.8	1925.7	149.5	6.432	8.192	1.518	182.2	31.1
509	322	9.01	34.914	2295.	2119.	*	2119	*	385.9	17.6	1971.7	128.8	8.168	*	17.5	1972.4	128.1	7.113	8.148	1.296	39.8	59.6
510	402	7.87	34.438	2297.	2165.	*	2138	*	490.8	23.4	2039.8	181.8	8.863	*	23.2	2040.6	181.1	8.964	8.048	1.821	52.3	38.7
511	501	6.87	34.383	2301.	2151.	*	2151	*	421.9	20.7	2018.6	111.8	8.119	*	20.5	2019.6	118.9	7.933	8.101	1.118	61.3	39.4
512	601	6.42	34.353	2298.	2135.	*	2146	*	388.1	18.9	1997.8	119.1	8.158	*	18.7	1998.2	118.8	7.338	8.135	1.188	67.6	45.4
513	699	5.92	34.324	2296.	2140.	*	2156	*	388.8	19.7	2005.4	114.9	8.147	*	19.5	2006.9	113.6	7.578	8.120	1.143	62.4	40.8
514	798	5.43	34.385	2299.	2163.	*	2159	*	435.8	22.5	2037.1	103.4	8.181	*	22.2	2038.7	102.1	8.494	8.071	1.027	58.8	27.3
515	897	4.87	34.388	2308.	2172.	*	2172	*	429.1	22.6	2045.9	103.5	8.187	*	22.3	2047.7	102.8	8.463	8.073	1.026	49.1	25.1
516	996	4.39	34.327	2314.	2196.	*	2199	*	479.8	25.6	2076.7	93.7	8.863	*	25.3	2078.6	92.1	9.457	8.024	0.327	38.3	15.1
517	1144	3.68	34.376	2322.	2232.	*	2238	*	575.8	31.6	2121.3	79.2	7.989	*	31.1	2123.4	77.5	11.387	7.944	0.781	22.4	-1.3
519	1439	2.74	34.916	2363.	2287.	*	2269	*	633.3	36.8	2177.9	73.1	7.953	*	35.3	2180.6	71.1	12.729	7.895	0.719	13.2	-11.3
520	1587	2.58	34.573	2370.	2289.	*	2289	*	582.7	33.4	2176.9	78.7	7.987	*	32.7	2179.9	76.4	11.911	7.924	0.774	17.2	-7.9
521	1736	2.303	34.611	2387.	2289.	*	2297	*	537.6	31.8	2173.4	84.5	8.028	*	30.3	2176.9	81.8	11.183	7.951	0.838	21.2	-4.3
202	2037	2.068	34.640	2405.	2311.	*	2311	*	554.3	32.3	2195.9	82.9	8.018	*	31.4	2199.9	79.7	11.778	7.929	0.818	16.1	-10.3
203	2209	1.919	34.555	2407.	2300.	*	2311	*	532.3	31.2	2191.4	85.4	8.026	*	30.3	2195.8	81.9	11.533	7.938	0.932	16.5	-10.4
205	2556	1.755	34.668	2400.	2311.	*	2321	*	537.4	31.6	2194.9	84.4	8.022	*	30.6	2200.8	80.4	12.033	7.928	0.817	11.3	-16.7
206	2732	1.699	34.573	2410.	2309.	*	2321	*	521.7	30.9	2191.7	86.5	8.034	*	29.7	2197.1	82.2	11.895	7.925	0.935	11.1	-17.5
207	2984	1.651	34.678	2407.	2315.	*	2325	*	554.9	32.8	2200.3	81.9	8.086	*	31.6	2206.8	77.4	12.027	7.892	3.787	4.4	-24.8
208	3079	1.525	34.679	2414.	2313.	*	2313	*	521.7	30.9	2195.5	86.6	8.034	*	29.6	2201.7	91.7	12.272	7.911	0.831	5.6	-23.2
209	3253	1.681	34.623	2410.	2301.	*	2315	*	491.5	29.1	2181.2	90.7	8.057	*	27.9	2187.8	85.4	11.928	7.927	0.368	8.2	-22.2
210	3425	1.591	34.685	2417.	2315.	*	2315	*	518.4	30.7	2197.1	87.2	8.037	*	29.3	2203.9	81.7	12.588	7.908	0.831	2.5	-29.6
211	3599	1.576	34.697	2405.	2311.	*	2310	*	544.7	32.3	2195.9	82.9	8.015	*	30.8	2203.8	77.2	13.467	7.871	0.785	-4.3	-35.9
212	3774	1.579	34.689	2411.	2308.	*	2310	*	484.4	29.7	2179.5	91.7	8.063	*	27.3	2187.2	85.5	12.232	7.913	0.869	1.8	-38.5
217	3947	1.531	34.693	2412.	2312.	*	2297	*	525.9	31.3	2196.2	85.5	8.029	*	29.7	2204.8	79.3	13.451	7.871	0.986	-6.3	-39.8
222	4128	1.584	34.695	2405.	2293.	*	2386	*	470.1	28.4	2172.4	92.1	8.066	*	26.9	2188.8	95.3	12.528	7.902	0.868	-3.2	-36.9

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 321 1 27 4 74 2156 129 22.8 W 4852
 321 2 29 4 74 9128 58 49.3 S 129 23.9 W 4968

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/80)	TALK (EQ/KG)	TIT (M/KG)	GC TC02* (M/KG)	CALC PARAMETERS P.ATH, T.=INSITU*				CALC PARAMETERS P.T.=INSITU				DELTA CO3* (M/KG)	DELTA CO3* (ARRG) (M/KG)				
							PCO2 (ATH) (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3* (M/KG)			AM (E-9)	PH	ICP (E-6)	(E-6)
281	2	16.80	34.849	2273.	1992.	*	1999	* 294.6	18.5	1784.3	197.2	8.281	* 18.5	1794.3	197.2	5.241	8.281	1.968	151.5	131.8
282	33	16.11	34.174	2298.	2885.	*	2123	* 297.9	18.8	1881.2	193.8	9.275	* 18.8	1881.3	192.9	5.317	8.274	1.932	147.8	125.4
283	82	13.10	34.398	2286.	2823.	*	2023	* 281.4	11.2	1828.6	183.2	8.288	* 11.2	1828.8	183.8	5.183	8.285	1.846	136.7	116.3
285	180	18.70	34.455	2291.	2898.	*	2098	* 359.5	15.5	1931.1	143.4	8.191	* 15.4	1931.5	143.8	6.533	9.185	1.445	96.3	74.9
286	258	9.85	34.431	2291.	2118.	*	2116	* 377.8	17.1	1962.4	138.4	8.168	* 17.1	1963.8	138.8	6.932	8.159	1.312	82.3	61.1
287	319	9.85	34.443	2253.	2119.	*	2119	* 378.5	17.8	1978.3	125.9	8.164	* 17.7	1976.8	125.3	7.849	8.152	1.265	77.1	55.7
288	448	6.96	34.394	2295.	2127.	*	2123	* 376.8	18.4	1986.5	121.8	8.163	* 18.2	1987.5	121.3	7.142	8.146	1.223	72.8	58.3
289	596	6.42	34.354	2388.	2132.	*	2134	* 368.9	18.4	1991.5	122.1	8.169	* 18.2	1992.8	121.8	7.128	8.147	1.218	78.6	48.4
218	745	5.95	34.316	2296.	2148.	*	2134	* 387.7	19.7	2085.5	114.9	8.148	* 19.5	2087.8	113.5	7.593	8.128	1.142	61.9	39.4
211	893	5.15	34.292	2384.	2146.	*	2146	* 373.8	19.5	2018.5	116.8	8.161	* 19.2	2012.5	114.3	7.467	8.127	1.149	61.5	38.6
213	1191	3.65	34.365	2327.	2222.	*	2222	* 515.7	28.3	2186.7	87.8	8.833	* 27.9	2189.8	85.1	18.323	7.986	0.957	29.6	5.8
214	1348	3.14	34.422	2339.	2243.	*	2222	* 544.3	38.5	2138.1	82.5	8.811	* 29.9	2132.6	88.4	11.887	7.958	0.811	23.5	-8.7
215	1488	2.88	34.493	2351.	2244.	*	2244	* 588.8	28.4	2127.2	98.4	8.845	* 27.8	2138.2	86.8	18.323	7.986	0.878	27.8	3.1
216	1637	2.68	34.551	2351.	2283.	*	2276	* 666.8	38.8	2168.8	69.8	7.938	* 37.3	2178.9	66.8	13.684	7.864	0.676	7.1	-18.8
217	1785	2.435	34.597	2372.	2275.	*	2275	* 538.8	38.9	2168.4	83.6	8.817	* 38.2	2163.9	88.9	11.387	7.947	0.828	19.8	-5.8
218	1934	2.25	34.628	2386.	2283.	*	2281	* 517.9	29.9	2166.8	87.1	8.835	* 29.1	2169.9	84.8	11.888	7.958	0.853	21.4	-4.6
219	2187	2.14	34.647	2392.	2298.	*	2281	* 552.2	32.8	2185.4	82.6	8.818	* 31.2	2187.5	79.4	11.883	7.926	0.886	15.1	-11.5
220	2279	2.88	34.657	2489.	2383.	*	2297	* 588.9	29.7	2184.2	89.1	8.845	* 28.9	2188.8	85.4	11.112	7.954	0.868	19.4	-7.8
221	2451	1.91	34.665	2487.	2319.	*	2318	* 576.3	33.7	2285.4	79.8	7.994	* 32.7	2218.2	76.1	12.783	7.896	0.773	8.2	-19.5
222	2623	1.828	34.669	2414.	2386.	*	2318	* 588.8	29.4	2186.3	98.3	8.852	* 29.3	2191.7	96.8	11.284	7.948	0.874	16.2	-12.1
183	2919	1.697	34.682	2413.	2318.	*	2365	* 545.7	32.2	2282.3	83.5	8.816	* 31.8	2288.8	79.8	12.688	7.899	0.883	5.8	-23.5
184	3892	1.631	34.687	2488.	2318.	*	2323	* 563.2	33.3	2283.8	88.9	8.882	* 32.8	2289.8	75.2	13.235	7.878	0.775	1.8	-28.9
185	3263	1.568	34.691	2487.	2259.	*	2318	* 493.3	29.3	2179.7	98.1	8.855	* 28.8	2186.3	84.7	11.891	7.925	0.862	7.4	-23.8
186	3438	1.588	34.696	2485.	2286.	*	2286	* 455.3	27.1	2163.1	95.9	8.886	* 25.8	2178.2	98.8	11.236	7.949	0.916	18.5	-28.6
187	3612	1.433	34.698	2485.	2296.	*	2288	* 487.3	29.8	2176.4	98.6	8.859	* 27.7	2183.7	84.7	12.171	7.915	0.861	2.9	-28.8
188	3785	1.382	34.783	2481.	2317.	*	2314	* 581.3	34.7	2284.5	77.8	7.987	* 33.1	2211.8	72.1	14.635	7.835	0.734	-11.9	-44.3
189	3956	1.555	34.781	2482.	2295.	*	2289	* 491.4	29.4	2176.2	89.4	8.855	* 27.9	2184.2	82.9	12.698	7.897	0.844	-3.4	-36.4
118	4138	1.321	34.782	2399.	2292.	*	2289	* 498.1	29.3	2173.3	89.3	8.855	* 27.8	2181.6	82.6	12.887	7.898	0.848	-6.1	-39.8
111	4386	1.387	34.786	2481.	2294.	*	2294	* 498.6	29.4	2175.2	89.4	8.855	* 27.7	2183.9	82.4	13.185	7.883	0.838	-8.9	-43.2
112	4488	1.388	34.718	2481.	2298.	*	2318	* 444.8	26.6	2156.5	96.8	8.894	* 25.1	2165.8	89.1	12.153	7.915	0.887	-4.7	-39.7
117	4668	1.382	34.718	2398.	2287.	*	2278	* 476.8	28.5	2167.1	91.4	8.866	* 26.8	2176.5	93.7	13.182	7.988	0.832	-12.8	-48.6
123	4827	1.317	34.718	2399.	2287.	*	2279	* 473.8	29.3	2166.7	91.9	8.869	* 26.5	2176.5	83.9	13.299	7.876	0.854	-15.1	-51.6

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SBT DEPTH
 322 3 30 4 74 0227 43 0.8 S 129 56.5 U 4406
 322 6 30 4 74 1218 43 0.7 S 129 55.6 U 4279

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (EQ/KG)	TIT		CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)	
					TC02*	GC TC02*	PC02 (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	AH	PH			ICP (E-6)
501	2	12.000	34.202	2206.	2053.	* 2024	* 324.4	13.1	1875.5	164.4	8.236	* 13.1	1875.5	164.4	5.004	0.236	1.640	118.6	98.0
502	25	12.790	34.203	2203.	2030.	*	* 303.8	12.2	1853.9	171.8	9.251	* 12.2	1854.8	171.0	5.496	0.260	1.722	125.0	105.2
503	49	11.974	34.204	2202.	2045.	* 2044	* 304.2	12.6	1866.1	166.3	9.257	* 12.6	1866.2	166.2	5.551	0.255	1.666	120.0	99.3
504	90	10.915	34.258	2293.	2069.	*	* 316.7	13.5	1897.6	157.9	8.241	* 13.5	1897.9	157.7	5.793	0.230	1.583	111.3	98.5
505	123	9.215	34.335	2285.	2083.	* 2086	* 332.7	15.0	1924.8	143.1	8.215	* 15.0	1925.1	142.9	5.153	0.211	1.450	96.1	75.1
506	155	9.436	34.334	2289.	2103.	*	* 357.3	16.5	1953.8	132.6	8.186	* 16.5	1954.1	132.3	5.596	0.181	1.332	95.3	64.3
507	224	7.722	34.424	2294.	2127.	* 2113	* 389.8	18.5	1986.9	121.7	8.152	* 18.5	1987.3	121.2	7.198	0.143	1.223	73.7	52.5
508	371	7.342	34.425	2294.	2124.	*	* 377.0	18.2	1982.5	123.3	8.163	* 18.1	1983.1	122.8	7.032	0.153	1.240	74.9	53.6
509	353	7.820	34.407	2292.	2119.	* 2124	* 364.4	17.7	1975.3	124.9	9.175	* 17.7	1977.1	124.2	6.894	0.162	1.293	75.7	54.2
510	460	6.567	34.377	2296.	2135.	*	* 388.2	19.1	1997.9	117.9	8.150	* 19.0	1998.9	117.8	7.373	0.132	1.180	57.6	45.0
511	549	6.492	34.363	2292.	2121.	* 2119	* 368.7	17.9	1979.5	123.6	8.177	* 17.8	1980.7	122.5	6.977	0.156	1.234	72.5	50.5
512	662	6.167	34.348	2295.	2139.	*	* 398.0	19.6	2002.9	115.5	8.146	* 19.4	2004.3	114.3	7.563	0.121	1.150	63.4	41.1
513	972	4.750	34.313	2309.	2187.	* 2174	* 478.1	24.8	2065.4	95.7	8.071	* 24.5	2068.4	94.1	9.251	0.033	0.947	40.5	17.5
516	1055	4.319	34.329	2313.	2200.	*	* 494.4	26.5	2082.6	98.9	8.058	* 26.1	2084.6	89.2	9.795	0.009	0.898	35.0	11.6
517	1160	3.774	34.353	2310.	2298.	*	* 496.3	27.2	2091.5	89.3	8.047	* 26.7	2093.8	87.5	9.367	0.001	0.801	32.2	9.4
518	1293	3.320	34.394	2320.	2219.	* 2216	* 495.2	27.5	2102.5	89.8	8.040	* 27.1	2105.8	86.3	10.067	7.997	0.076	30.5	5.4
519	1441	2.966	34.451	2341.	2255.	* 2236	* 504.2	32.9	2144.6	77.5	7.982	* 32.3	2147.3	75.4	11.000	7.925	0.762	17.6	-7.8
520	1592	2.784	34.510	2355.	2259.	*	* 541.6	30.8	2145.5	92.7	8.014	* 30.2	2148.5	88.3	11.199	7.951	0.812	21.1	-3.9
522	1809	2.407	34.611	2374.	2306.	*	* 570.4	30.5	2197.9	69.6	7.930	* 37.7	2201.4	67.8	14.001	7.354	0.679	4.9	-21.0
523	2036	2.267	34.636	2306.	2294.	*	* 568.4	32.4	2100.2	81.4	8.003	* 31.5	2104.2	78.3	11.960	7.922	0.795	14.7	-11.6
524	2107	2.130	34.651	2394.	2300.	* 2295	* 552.3	32.1	2105.3	82.6	8.010	* 31.2	2109.6	79.2	11.944	7.923	0.805	14.1	-12.7
503	2645	1.800	34.671	2401.	2299.	* 2316	* 510.8	30.4	2101.0	86.0	8.035	* 29.4	2107.0	82.6	11.757	7.930	0.840	12.6	-15.7
504	2816	1.906	34.676	2404.	2311.	* 2324	* 552.9	32.5	2196.2	82.3	8.010	* 31.3	2201.7	77.9	12.671	7.897	0.792	6.0	-22.9
505	2991	1.744	34.683	2400.	2303.	* 2319	* 535.8	31.5	2107.2	84.2	8.022	* 30.3	2193.1	79.6	12.517	7.902	0.809	5.6	-23.9
506	3164	1.677	34.600	2400.	2317.	*	* 591.4	34.9	2204.9	77.2	7.982	* 33.6	2210.9	72.5	13.909	7.054	0.730	-3.5	-33.6
507	3342	1.617	34.693	2407.	2300.	* 2307	* 527.8	31.2	2191.4	85.4	8.029	* 29.0	2190.0	80.1	12.733	7.095	0.815	1.9	-20.0
508	3513	1.533	34.699	2400.	2297.	*	* 500.5	30.2	2179.5	87.3	8.041	* 28.0	2196.5	81.7	12.563	7.901	0.831	1.2	-30.1
509	3607	1.455	34.702	2398.	2297.	* 2290	* 513.9	30.6	2100.2	86.2	8.036	* 29.1	2107.5	80.3	12.914	7.009	0.817	-2.3	-34.3
510	3857	1.410	34.703	2393.	2277.	* 2294	* 460.1	27.4	2153.6	94.0	8.079	* 26.0	2163.5	87.5	11.062	7.926	0.890	2.5	-30.1
511	4027	1.316	34.700	2390.	2207.	*	* 501.7	30.8	2169.9	87.1	8.044	* 28.5	2177.9	80.6	13.090	7.003	0.820	-6.7	-40.0
512	4027	1.316	34.700	2395.	2291.	* 2299	* 499.6	29.9	2173.4	87.7	8.047	* 28.4	2101.4	81.2	13.020	7.005	0.926	-6.1	-39.4
517	4213	1.290	34.709	2395.	2299.	*	* 524.7	31.5	2102.4	94.1	8.027	* 29.0	2190.7	77.5	13.970	7.050	0.790	-12.4	-46.5
523	4307	1.234	34.710	2395.	2301.	* 2209	* 535.0	32.1	2196.3	82.5	9.019	* 30.4	2194.9	75.7	14.377	7.942	0.771	-16.7	-51.4

CARBONATE REPORT

JGDG03 PACIFIC STATION EAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 324 3 7 5 74 1824 22 58.3 S 146 4.3 W 5862
 324 5 7 5 74 2321 22 58.3 S 146 3.9 W 5858

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (00/KG)	MEASURED PARAMETERS			CALC PARAMETERS P=1 ATM, T=INSITU					CALC PARAMETERS P, T=INSITU			DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)		
					TIT (E-6)	GC (E-6)	TC02 (M/KG)	PC02 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)			PH	PH
301	6	26.556	35.948	2300.	1983.	* 1998	* 382.6	8.2	1695.0	279.8	8.383	* 8.2	1695.0	279.8	4.984	8.382	2.948	234.7	214.4
302	115	21.694	35.715	2366.	2000.	* 2016	* 278.1	8.6	1734.7	256.7	8.319	* 8.6	1735.0	256.4	4.836	8.315	2.685	210.4	189.8
303	334	14.659	35.144	2321.	2067.	*	* 331.8	12.5	1875.8	178.6	8.235	* 12.5	1876.7	177.9	5.377	8.224	1.832	130.8	108.8
304	535	9.141	34.479	2304.	2143.	* 2145	* 415.8	19.5	2084.9	118.6	8.138	* 19.3	2086.0	117.6	7.765	8.118	1.189	67.9	45.9
305	585	6.118	34.342	2301.	2153.	*	* 414.4	20.8	2021.7	110.4	8.124	* 20.6	2023.1	109.2	7.983	8.098	1.188	58.1	35.8
306	925	5.263	34.318	2301.	2186.	*	* 581.9	26.0	2069.0	92.8	8.046	* 25.7	2069.6	90.6	9.685	8.014	0.912	38.4	15.6
307	880	4.940	34.336	2309.	2285.	*	* 537.3	29.3	2090.5	96.2	8.018	* 28.8	2092.2	84.9	10.378	7.984	0.854	32.8	9.1
308	1139	3.345	34.484	2357.	2258.	*	* 512.6	28.5	2133.0	88.5	8.039	* 28.8	2135.3	96.7	10.179	7.992	0.976	31.1	7.3
309	1489	2.556	34.577	2384.	2305.	* 2308	* 622.7	35.6	2194.4	75.8	7.962	* 34.9	2197.2	72.8	12.512	7.983	0.738	14.6	-18.2
310	1879	2.204	34.625	2412.	2304.	* 2319	* 586.3	29.3	2184.4	90.3	8.048	* 28.6	2188.2	87.3	10.624	7.974	0.886	25.2	-8.7
311	2089	2.877	34.638	2408.	2323.	*	* 593.1	34.5	2218.1	78.4	7.984	* 33.6	2214.1	75.3	12.577	7.980	0.765	11.3	-15.3
312	2376	1.924	34.653	2417.	2321.	* 2318	* 547.3	32.8	2204.8	84.1	8.017	* 31.8	2209.5	88.4	11.968	7.922	0.817	13.3	-14.2
315	2579	1.854	34.659	2417.	2324.	* 2313	* 558.1	32.7	2208.6	82.6	8.009	* 31.7	2213.7	78.6	12.438	7.986	0.799	9.3	-18.8
316	2874	1.727	34.670	2418.	2320.	*	* 536.6	31.6	2203.1	85.2	8.024	* 38.5	2208.8	80.7	12.329	7.989	0.828	8.1	-21.0
317	3167	1.618	34.679	2416.	2312.	* 2386	* 511.3	30.3	2193.5	88.2	8.042	* 29.8	2199.9	93.1	12.132	7.916	0.845	7.0	-23.1
318	3366	1.554	34.684	2415.	2314.	* 2305	* 528.3	30.9	2196.5	96.6	8.033	* 29.5	2203.3	81.2	12.577	7.988	0.826	2.7	-28.2
319	3662	1.486	34.691	2412.	2310.	*	* 514.5	30.6	2192.4	87.8	8.039	* 29.2	2199.7	81.2	12.918	7.892	0.825	-1.2	-33.1
320	3963	1.443	34.695	2405.	2293.	* 2294	* 477.0	30.4	2172.4	92.1	8.067	* 26.9	2180.5	85.6	12.323	7.909	0.378	-0.8	-33.9
321	4216	1.421	34.696	2401.	2286.	* 2299	* 466.3	27.8	2164.5	93.7	8.075	* 26.3	2173.1	86.7	12.375	7.907	0.881	-3.2	-37.2
322	4469	1.429	34.698	2399.	2311.	*	* 564.7	33.7	2197.7	79.7	7.999	* 31.8	2206.3	72.9	15.188	7.819	0.742	-20.6	-55.6
323	4767	1.457	34.697	2399.	2292.	* 2286	* 492.3	29.3	2173.4	89.3	8.054	* 27.5	2182.9	91.6	13.785	7.863	0.830	-16.4	-52.6

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 325 1 18 5 74 1537 14 48.8 S 138 55.4 W 4849

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/00)	TALK (ED/KG)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATM, T=INSITU*					CALC PARAMETERS P, T=INSITU					DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)	
					TC02* (M/KG) (E-6)	TC02 (M/KG) (E-6)	GC (M/KG) (E-6)	PCO2 (ATM) (M/KG) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	PH			ICP (E-6)
119	2493	1.817	34.571	2416.	2317.	*	*	533.4	31.3	2290.0	95.6	9.025	30.3	2205.0	91.7	11.323	7.927	0.930	13.3	-14.6
120	2788	1.741	34.577	2417.	2317.	*	*	529.7	31.1	2199.7	86.2	9.930	30.9	2202.2	81.8	12.065	7.918	0.931	18.1	-18.7
122	3383	1.582	34.584	2417.	2320.	*	*	536.3	31.9	2203.6	84.6	9.023	30.4	2210.3	79.3	12.955	7.888	0.906	0.5	-30.4
123	3682	1.562	34.580	2420.	2318.	*	*	490.8	29.1	2189.5	91.4	0.868	27.6	2197.0	95.3	12.216	7.913	0.868	2.0	-29.2
124	4027	1.509	34.580	2421.	2310.	*	*	487.5	28.9	2109.1	92.8	0.862	27.4	2197.3	95.3	12.544	7.902	0.868	-1.8	-35.1

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 326 1 20 5 74 0836 14 3.3 S 125 15.7 W 3736
 325 3 20 5 74 0815 14 3.8 S 125 16.8 W 3823

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG) (E-6)	TIT TC02* (M/KG) (E-6)	GC TC02* (M/KG) (E-6)	*CALC PARAMETERS P=1ATH.T=INSITU*				CALC PARAMETERS P.T=INSITU				DELTA CO3- (CALC) (M/KG) (E-5)	DELTA CO3- (ARRG) (M/KG) (E-5)			
							PC02 (ATM) (M/KG) (E-6)	H2CO3 (M/KG) (E-5)	HC03- (M/KG) (E-6)	CO3* (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3* (M/KG) (E-6)			PH	PH	ICP (E-6)
301	2	25.737	35.620	2350.	2024.	* 2032	* 375.9	18.4	1776.3	237.3	8.224	* 10.4	1776.3	237.3	5.966	8.224	2.478	192.1	171.8
302	36	25.760	35.956	2378.	2022.	* 2081	* 358.1	9.7	1768.3	252.8	8.251	* 9.7	1768.4	251.9	5.629	8.250	2.656	206.7	186.3
303	55	25.590	36.185	2396.	2029.	* 2039	* 339.1	9.4	1759.9	239.6	8.263	* 9.4	1768.1	239.5	5.483	8.261	2.753	214.1	193.8
304	94	25.121	36.384	2408.	2030.	* 92	* 322.2	9.1	1754.2	266.8	8.298	* 9.8	1754.4	266.6	5.298	8.277	2.343	221.1	208.7
305	120	23.979	36.438	2407.	2036.	* 2059	* 317.1	9.2	1765.4	261.4	8.282	* 9.2	1765.7	261.1	5.265	8.279	2.799	215.4	194.9
306	146	22.573	36.238	2398.	2053.	*	* 331.8	9.9	1799.6	243.5	9.264	* 9.9	1800.0	243.1	5.587	8.259	2.583	197.1	176.5
307	197	19.793	35.665	2357.	2070.	* 2081	* 366.3	11.9	1854.7	283.4	8.217	* 11.9	1855.2	282.9	6.159	8.218	2.122	156.3	135.5
308	256	16.877	35.863	2318.	2076.	* 2007	* 373.9	13.6	1890.5	171.9	8.195	* 13.5	1891.1	171.4	6.509	8.186	1.762	124.1	103.1
309	316	11.448	34.688	2293.	2175.	*	* 632.5	26.5	2052.9	95.5	7.977	* 26.4	2053.5	95.1	10.841	7.963	0.964	47.1	25.3
310	363	9.339	34.534	2302.	2237.	* 2251	* 864.6	38.9	2139.8	68.2	7.845	* 38.7	2138.6	67.7	14.764	7.831	0.806	19.3	-2.2
311	464	7.537	34.555	2303.	2237.	* 2249	* 790.1	30.2	2130.9	68.0	7.869	* 37.9	2131.7	67.4	14.079	7.851	0.683	18.1	-3.7
312	503	6.442	34.519	2313.	2234.	* 2240	* 695.2	34.5	2125.3	74.1	7.922	* 34.3	2126.4	73.3	12.684	7.900	0.742	23.1	8.9
316	715	5.584	34.586	2324.	2249.	* 2263	* 695.3	35.7	2141.8	72.3	7.920	* 35.4	2142.3	71.3	12.822	7.922	0.721	19.9	-2.6
317	823	4.991	34.587	2332.	2269.	* 2268	* 758.9	39.3	2163.8	66.7	7.880	* 38.9	2164.5	65.6	13.943	7.856	0.664	13.3	-9.5
318	935	4.489	34.519	2346.	2277.	* 2291	* 788.8	37.7	2169.6	69.7	7.912	* 37.3	2171.3	68.4	13.329	7.875	0.692	15.1	-7.9
319	1092	3.913	34.537	2361.	2287.	* 2295	* 672.0	36.5	2178.2	72.3	7.933	* 36.1	2180.2	70.7	12.881	7.998	0.716	16.1	-7.4
321	1394	3.126	34.570	2379.	2301.	* 2319	* 639.3	35.9	2190.8	74.5	7.953	* 35.2	2193.4	72.4	12.657	7.898	0.734	15.1	-9.3
322	1543	2.787	34.594	2390.	2304.	* 2315	* 597.9	33.9	2191.6	78.5	7.981	* 33.2	2194.5	76.2	12.846	7.919	0.773	17.5	-7.4
323	1693	2.503	34.612	2392.	2301.	* 2321	* 571.2	32.7	2187.2	81.1	7.998	* 32.0	2198.5	78.5	11.735	7.931	0.796	18.3	-7.0
181	1847	2.274	34.629	2390.	2319.	* 2322	* 621.5	35.9	2207.8	75.3	7.964	* 35.1	2211.3	72.6	12.883	7.898	0.737	10.9	-14.9
324	1917	2.104	34.639	2402.	2311.	*	* 560.1	32.9	2196.8	81.3	8.000	* 32.1	2200.5	78.4	11.916	7.924	0.796	16.0	-10.1
182	1994	2.090	34.644	2399.	2315.	*	* 594.9	34.6	2202.7	77.7	7.981	* 33.7	2206.5	74.7	12.558	7.901	0.759	11.6	-14.7
183	2146	1.975	34.656	2400.	2311.	* 2335	* 541.5	31.6	2195.0	84.4	8.020	* 30.7	2199.2	81.1	11.637	7.934	0.923	16.3	-10.4
185	2442	1.983	34.667	2420.	2326.	* 2337	* 555.2	32.6	2210.3	83.2	8.011	* 31.5	2215.1	79.4	12.199	7.914	0.907	11.6	-16.1
186	2594	1.816	34.672	2410.	2319.	*	* 534.4	31.4	2201.9	85.7	8.026	* 30.3	2207.0	81.6	11.955	7.922	0.830	12.1	-16.8
187	2744	1.784	34.675	2420.	2327.	* 2334	* 557.7	32.8	2211.5	82.7	8.009	* 31.7	2216.9	79.4	12.511	7.999	0.797	7.3	-21.4
188	2992	1.747	34.677	2410.	2321.	*	* 548.9	31.9	2204.4	84.7	8.021	* 30.7	2210.2	80.2	12.439	7.985	0.915	7.3	-21.8
189	3041	1.782	34.679	2419.	2314.	* 2334	* 510.6	30.1	2195.8	88.9	8.044	* 28.9	2201.1	84.8	11.952	7.923	0.854	9.4	-20.3
118	3195	1.637	34.681	2412.	2320.	*	* 556.5	32.9	2205.1	82.0	8.000	* 31.6	2211.3	77.1	13.100	7.880	0.794	0.6	-29.6
111	3349	1.599	34.683	2420.	2310.	* 2311	* 519.3	30.8	2200.8	87.3	8.037	* 29.4	2206.7	81.9	12.503	7.903	0.833	3.6	-27.2
112	3505	1.595	34.685	2417.	2313.	*	* 510.8	30.3	2194.5	98.2	8.043	* 28.9	2201.5	82.6	12.506	7.903	0.840	2.3	-29.0
122	3705	1.595	34.686	2422.	2322.	* 2329	* 527.3	31.2	2204.5	96.3	8.031	* 29.7	2211.9	80.4	13.097	7.883	0.817	-2.5	-34.5

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
329 1 21 5 74 2248 9 16.9 S 125 32.5 W 3896
328 3 22 5 74 2633 9 14.7 S 125 34.5 W 4889

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/100)	MEASURED PARAMETERS				CALC PARAMETERS P-IATH.T-INSITU*							CALC PARAMETERS P.T-INSITU				DELTA CO3- (CALC) (M/KG)	DELTA CO3- (ARAG) (M/KG)	
				TALK (E-6)	TC02* (E-6)	GC (E-6)	TC02** (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	PH	ICP (E-6)			
315	5	26.340	35.288	2329.	2812.	*	*	482.5	11.8	1775.1	225.9	8.199	*	11.8	1775.1	225.9	6.325	8.199	2.337	188.7	158.4
381	135	22.115	36.872	2382.	2856.	*	*	347.4	18.6	1815.8	238.4	8.244	*	18.5	1815.4	238.1	5.739	8.248	2.433	184.1	163.5
382	164	18.689	35.494	2358.	2879.	*	2181	374.2	12.6	1874.8	192.5	8.286	*	12.5	1874.4	192.1	6.386	8.288	1.999	145.7	124.9
383	214	13.282	34.798	2298.	2198.	*	*	779.1	38.9	2888.2	85.9	7.982	*	38.8	2888.6	86.6	12.771	7.894	0.883	39.4	18.4
384	265	18.684	34.756	2384.	2238.	*	2268	855.6	36.3	2128.3	73.8	7.855	*	36.6	2128.7	72.6	14.383	7.845	3.748	24.9	3.7
385	385	9.931	34.741	2318.	2247.	*	*	988.7	39.3	2139.4	67.7	7.829	*	39.8	2139.9	67.3	15.238	7.917	9.686	19.3	-2.0
386	345	9.567	34.728	2388.	2248.	*	2264	857.3	38.2	2132.8	69.7	7.858	*	38.1	2132.6	69.3	14.569	7.837	8.785	21.8	-8.4
387	393	9.837	34.695	2387.	2231.	*	2264	788.3	35.8	2121.9	73.3	7.981	*	35.6	2122.6	72.8	13.818	7.866	8.748	24.1	2.5
388	454	8.473	34.656	2315.	2257.	*	*	898.5	41.2	2158.8	65.8	7.831	*	41.8	2151.6	64.4	15.369	7.813	8.555	15.3	-6.4
389	454	8.473	34.658	2388.	2252.	*	2277	981.5	41.7	2146.3	64.8	7.825	*	41.5	2147.1	63.4	15.591	7.887	8.644	14.3	-7.5
318	454	8.473	34.658	2318.	2248.	*	*	968.7	39.8	2141.5	66.7	7.844	*	39.6	2142.3	66.1	14.918	7.826	8.672	17.8	-4.8
311	454	8.473	34.662	2314.	2258.	*	2282	984.2	41.8	2152.8	64.1	7.825	*	41.6	2152.8	63.5	15.598	7.887	8.646	14.4	-7.3
312	454	8.488	34.662	2328.	2257.	*	*	938.1	43.4	2151.8	61.8	7.889	*	43.2	2152.6	61.2	16.184	7.791	8.622	12.1	-9.6
316	464	9.366	34.656	2388.	2248.	*	2281	969.1	48.4	2142.8	65.7	7.839	*	48.2	2142.8	65.1	15.896	7.821	8.661	15.8	-5.9
317	464	8.362	34.656	2318.	2253.	*	2276	898.7	41.4	2147.3	64.4	7.838	*	41.2	2148.8	63.8	15.434	7.912	8.648	14.6	-7.2
318	531	7.686	34.614	2311.	2262.	*	2288	924.4	44.8	2157.3	68.7	7.812	*	43.7	2158.2	68.1	16.187	7.791	8.618	18.3	-11.6
319	611	6.813	34.574	2318.	2243.	*	*	748.4	36.3	2133.3	71.4	7.899	*	36.8	2136.4	70.6	13.336	7.875	8.715	28.1	-2.1
320	699	6.875	34.546	2327.	2292.	*	2385	978.4	49.2	2187.8	55.8	7.784	*	48.9	2189.8	54.1	17.928	7.756	8.548	2.9	-19.5
321	798	5.347	34.535	2333.	2294.	*	*	922.8	47.6	2189.9	56.5	7.886	*	47.3	2191.2	55.5	16.816	7.774	8.562	3.6	-19.1
322	889	4.888	34.537	2344.	2294.	*	2315	832.8	43.8	2189.8	61.2	7.848	*	43.4	2198.5	60.1	15.411	7.812	8.689	7.3	-15.7
181	983	4.349	34.543	2356.	2293.	*	2323	741.9	39.7	2186.2	67.1	7.894	*	39.3	2188.8	65.8	13.953	7.855	8.666	12.1	-11.1
323	1888	4.864	34.553	2363.	2383.	*	*	754.6	48.8	2196.3	65.9	7.887	*	48.3	2198.2	64.5	14.322	7.844	8.633	9.9	-13.6
183	1334	3.324	34.577	2378.	2258.	*	2327	643.1	35.7	2187.9	74.4	7.951	*	35.1	2198.4	72.5	12.646	7.899	8.735	15.7	-9.5
184	1481	3.855	34.589	2385.	2386.	*	*	635.1	35.6	2195.3	75.1	7.956	*	35.8	2198.1	72.9	12.662	7.897	8.748	14.8	-9.9
185	1632	2.761	34.688	2393.	2321.	*	2312	665.3	37.7	2211.4	71.9	7.938	*	37.8	2214.4	69.6	13.415	7.872	8.786	18.8	-15.1
186	1782	2.585	34.623	2481.	2316.	*	*	688.3	34.4	2283.3	78.3	7.979	*	33.6	2286.8	75.6	12.349	7.988	8.758	14.6	-11.8
187	1932	2.324	34.632	2399.	2328.	*	2341	623.4	35.9	2288.7	75.4	7.963	*	35.1	2212.4	72.5	13.989	7.986	8.736	18.2	-16.8
188	2882	2.141	34.644	2489.	2326.	*	*	683.8	35.8	2213.5	77.5	7.977	*	34.1	2217.5	74.4	12.779	7.894	8.755	18.3	-16.2
189	2232	2.812	34.655	2414.	2323.	*	2335	568.6	33.2	2288.3	81.6	8.881	*	32.2	2212.6	78.1	12.242	7.912	8.734	12.5	-14.5
118	2376	1.917	34.662	2418.	2331.	*	*	585.2	34.3	2217.8	79.7	7.998	*	33.2	2221.7	76.1	12.741	7.895	8.773	9.8	-18.5
111	2525	1.868	34.667	2423.	2329.	*	2352	556.8	32.6	2213.1	83.2	8.811	*	31.5	2218.1	79.3	12.295	7.918	8.886	18.6	-17.3
112	2673	1.819	34.672	2427.	2327.	*	*	532.9	31.3	2289.3	86.4	8.828	*	38.2	2214.6	82.1	11.967	7.922	8.935	11.8	-16.6
116	2778	1.786	34.673	2437.	2325.	*	2344	492.3	29.8	2283.1	92.9	8.862	*	27.9	2288.8	88.3	11.183	7.951	8.898	16.8	-12.8
117	2872	1.761	34.677	2428.	2324.	*	*	545.8	32.1	2287.6	84.3	8.817	*	38.9	2213.3	79.8	12.589	7.983	8.811	7.2	-21.9
118	2973	1.711	34.678	2423.	2322.	*	2325	525.9	31.8	2284.2	86.8	8.833	*	29.8	2218.1	82.1	12.186	7.914	8.834	8.3	-21.2
119	3126	1.648	34.682	2427.	2317.	*	*	493.4	29.2	2196.2	91.6	8.858	*	28.8	2282.6	86.4	11.637	7.934	8.879	18.8	-19.2
120	3275	1.585	34.687	2427.	2323.	*	2322	513.9	38.4	2284.1	88.5	8.842	*	29.1	2218.7	83.2	12.262	7.911	8.946	5.7	-24.8
121	3423	1.537	34.687	2429.	2321.	*	*	582.6	29.8	2281.1	98.1	8.851	*	28.5	2288.8	84.5	12.179	7.914	8.959	5.2	-25.8
122	3574	1.512	34.687	2427.	2322.	*	2339	588.9	38.2	2282.8	89.8	8.845	*	29.8	2218.8	83.2	12.584	7.983	8.846	2.8	-29.6
123	3728	1.488	34.688	2429.	2323.	*	*	585.5	38.1	2283.4	89.5	8.848	*	29.6	2218.9	83.5	12.588	7.988	8.849	8.4	-31.7
124	3847	1.468	34.688	2428.	2312.	*	2324	476.9	28.4	2189.9	93.7	8.871	*	26.9	2197.9	87.2	12.078	7.918	8.887	2.5	-38.1

CARBONATE REPORT

GEOSIDS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 331 3 24 5 74 2235 4 36.5 S 123 3.5 W 4331
 331 3 24 5 74 2242 4 34.5 S 123 10.0 W 4137

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02 - 15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/88)	TALK (ED/KG)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH, T=INSITU*				CALC PARAMETERS P, T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)				
					TIT (E-6)	GC (E-6)	TC02* (M/KG)	TC02 (M/KG)	PC02 (ATH) (E-6)	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HC03- (M/KG) (E-6)	CO3= (M/KG) (E-6)			PH	PH	ICP (E-6)	
581	18	26.428	35.137	2326.	2083.	*	2011	*	389.9	18.7	1762.3	238.8	0.211	*	18.7	1762.3	238.8	6.168	8.218	2.369	184.8	164.4
582	39	25.271	35.146	2323.	2083.	*	2242	*	391.7	18.8	1764.5	227.8	0.288	*	18.8	1764.6	227.7	6.288	8.287	2.346	182.3	161.9
583	59	25.264	35.466	2324.	2087.	*	2826	*	481.2	11.8	1778.7	225.3	0.198	*	11.8	1778.8	225.2	6.359	8.197	2.341	179.7	159.3
584	79	28.759	35.465	2349.	2079.	*		*	418.7	13.8	1872.9	193.1	0.178	*	13.8	1873.1	193.8	6.675	8.176	2.806	147.1	126.5
585	108	16.583	35.294	2331.	2123.	*	2156	*	468.2	16.7	1955.8	151.3	0.115	*	16.7	1955.2	151.1	7.737	8.111	1.563	184.9	94.2
586	116	14.526	35.827	2311.	2192.	*		*	729.1	27.7	2866.5	97.8	7.935	*	27.7	2866.7	97.6	11.732	7.931	1.883	51.2	38.4
587	138	13.186	34.954	2389.	2218.	*	2242	*	792.8	31.4	2892.1	86.6	7.896	*	31.3	2892.3	86.4	12.842	7.891	8.885	39.7	18.8
588	177	12.567	34.916	2386.	2286.	*	2243	*	763.8	38.9	2898.5	86.6	7.988	*	38.8	2888.8	86.4	12.549	7.981	8.384	39.4	18.5
589	226	12.162	34.884	2387.	2233.	*	2279	*	911.3	37.3	2122.1	73.6	7.836	*	37.2	2122.5	73.3	14.881	7.827	8.758	26.8	4.9
518	273	11.588	34.358	2318.	2235.	*	2263	*	912.1	38.8	2129.8	72.8	7.834	*	37.9	2129.4	71.6	13.819	7.823	8.732	24.8	2.8
511	385	11.816	34.817	2389.	2259.	*		*	1848.4	44.2	2151.1	62.7	7.778	*	44.1	2151.6	62.4	17.139	7.766	8.637	14.5	-6.8
512	374	9.886	34.757	2312.	2245.	*	2254	*	875.3	38.7	2136.8	69.5	7.843	*	38.5	2137.4	69.8	14.836	7.829	8.783	28.5	-1.8
516	423	9.199	34.781	2312.	2257.	*	2276	*	937.3	42.3	2158.8	63.8	7.813	*	42.1	2151.6	63.3	15.988	7.796	8.644	14.4	-7.2
517	494	8.147	34.636	2311.	2234.	*	2264	*	756.8	35.4	2125.8	73.6	7.895	*	35.2	2125.9	72.9	13.383	7.876	8.748	23.4	1.6
518	584	7.128	34.586	2326.	2258.	*	2278	*	737.8	35.7	2141.1	73.2	7.984	*	35.5	2142.2	72.4	13.174	7.988	8.734	22.8	-8.2
519	694	5.984	34.552	2328.	2269.	*	2293	*	884.3	48.6	2163.4	65.8	7.864	*	48.3	2164.6	64.1	14.578	7.837	8.649	12.9	-9.5
520	794	5.284	34.548	2341.	2278.	*	2294	*	717.5	37.1	2162.2	78.6	7.989	*	36.8	2163.7	59.6	13.239	7.878	8.784	17.5	-5.1
521	941	4.732	34.351	2356.	2287.	*	2317	*	718.9	37.9	2179.1	69.9	7.989	*	37.5	2188.8	68.6	13.441	7.872	8.695	15.4	-7.7
522	1089	4.233	34.568	2368.	2303.	*	2298	*	732.3	39.4	2195.4	68.3	7.981	*	38.9	2197.3	66.8	13.871	7.898	8.677	12.3	-11.2
523	1238	3.723	34.572	2372.	2385.	*	2335	*	731.2	48.8	2201.6	67.4	7.988	*	39.5	2283.8	65.7	14.181	7.851	8.666	9.8	-14.1
524	1376	3.377	34.585	2386.	2315.	*	2337	*	683.4	37.9	2285.8	71.3	7.928	*	37.3	2288.3	69.4	13.379	7.874	8.784	12.3	-12.1
581	1543	2.951	34.684	2482.	2338.	*	2355	*	713.7	48.3	2229.3	68.4	7.911	*	39.6	2232.1	66.3	14.168	7.849	8.673	7.6	-17.3
582	1762	2.347	34.622	2418.	2338.	*		*	627.4	35.9	2218.8	76.1	7.963	*	35.1	2221.4	73.5	12.794	7.893	8.746	12.7	-12.8
583	1985	2.271	34.638	2415.	2328.	*	2343	*	591.3	34.1	2214.2	79.6	7.987	*	33.3	2218.1	75.6	12.369	7.988	8.778	13.6	-12.6
584	2287	2.858	34.651	2438.	2335.	*		*	562.4	32.7	2219.8	83.5	8.888	*	31.8	2224.2	88.8	12.887	7.921	8.813	14.7	-12.2
585	2432	1.896	34.661	2426.	2341.	*	2361	*	595.8	34.9	2227.2	78.9	7.984	*	33.8	2231.9	75.2	12.986	7.887	8.764	7.5	-28.1
586	2633	1.788	34.659	2429.	2335.	*		*	556.4	32.7	2218.9	83.4	8.811	*	31.6	2224.1	79.3	12.431	7.985	8.886	9.1	-19.2
587	2876	1.696	34.673	2438.	2335.	*	2338	*	558.9	32.5	2218.6	83.9	8.815	*	31.3	2224.3	79.4	12.581	7.988	8.887	6.7	-22.4
588	3896	1.585	34.688	2438.	2326.	*		*	514.4	38.5	2287.8	88.5	8.842	*	29.2	2213.2	83.5	12.859	7.919	8.849	8.2	-21.7
589	3322	1.588	34.684	2438.	2322.	*	2351	*	498.8	29.6	2281.8	98.6	8.854	*	28.3	2288.5	95.1	11.975	7.922	8.866	7.1	-23.6
319	3544	1.431	34.688	2433.	2321.	*	2328	*	484.9	28.9	2199.3	92.9	8.865	*	27.5	2286.5	86.9	11.982	7.924	8.884	6.1	-25.4
511	3771	1.483	34.591	2478.	2328.	*	2321	*	498.8	29.3	2199.1	91.7	8.868	*	27.3	2286.9	85.4	12.581	7.919	8.869	1.6	-38.7
512	3996	1.426	34.692	2429.	2318.	*		*	461.1	27.5	2186.8	96.5	8.884	*	26.8	2194.3	89.7	11.962	7.926	8.912	2.9	-38.3
513	4289	1.437	34.591	2483.	2318.	*	2334	*	489.5	29.2	2197.2	91.6	8.869	*	27.6	2285.9	84.5	12.923	7.889	8.868	-6.5	-48.3

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
334 1 27 5 74 3141 8 3.3 N 124 34.8 W 4846
334 3 27 5 74 1013 8 8.1 N 124 28.4 W 4569

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	MEASURED PARAMETERS			CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU			DELTA CO3* (M/KG)	DELTA CO3- (ARAG) (M/KG)			
				TALK (M/KG)	TC02* (M/KG)	GC (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3* (M/KG)			TAH	PH	ICP (M/KG)
301	4	24.885	35.182	2319.	2025.	* 2052	* 418.1	11.9	1803.1	218.8	8.188	* 11.9	1803.1	218.8	6.603	8.188	2.166	164.7	144.4
302	43	24.786	35.164	2322.	2016.	* 2052	* 394.3	11.2	1786.7	218.8	8.201	* 11.2	1786.8	217.9	6.311	8.200	2.246	172.4	152.8
303	74	22.252	34.952	2308.	2043.	* 2075	* 448.3	13.4	1844.8	184.8	8.152	* 13.4	1845.0	184.6	7.285	8.150	1.886	138.8	118.2
304	91	20.723	34.936	2306.	2063.	* 2087	* 447.5	14.2	1873.7	175.1	8.142	* 14.2	1873.9	174.9	7.268	8.139	1.791	128.9	108.3
305	111	18.951	34.838	2308.	2078.	* 2109	* 461.0	15.4	1901.9	168.8	8.125	* 15.4	1902.1	163.5	7.564	8.121	1.540	114.4	93.7
306	137	14.658	34.745	2301.	2115.	* 2145	* 471.3	17.9	1960.7	136.4	8.103	* 17.8	1961.0	136.2	7.978	8.098	1.387	89.6	68.7
307	179	13.514	34.746	2315.	2138.	* 2159	* 455.8	17.9	1976.6	135.5	8.114	* 17.9	1977.0	135.1	7.982	8.108	1.376	88.2	67.2
308	204	12.750	34.916	2316.	2146.	* 2165	* 486.5	19.5	2000.4	126.1	8.086	* 19.5	2000.8	125.7	8.339	8.079	1.287	79.6	57.6
309	282	12.032	34.864	2311.	2173.	* 2205	* 576.2	23.7	2042.1	107.2	8.018	* 23.6	2042.7	106.7	9.834	8.007	1.091	59.0	37.3
310	366	11.122	34.802	2309.	2223.	* 2268	* 798.1	33.8	2110.1	79.1	7.885	* 33.6	2110.8	78.6	13.445	7.871	0.901	30.2	8.8
311	394	10.694	34.784	2311.	2235.	* 2294	* 845.6	36.3	2124.7	74.0	7.861	* 36.2	2125.4	73.5	14.267	7.846	0.749	24.9	3.4
312	479	8.804	34.671	2318.	2270.	* 2294	* 978.2	44.8	2164.4	68.9	7.795	* 44.5	2165.2	68.3	16.744	7.776	0.613	11.0	-10.8
316	587	7.193	34.683	2322.	2257.	* 2303	* 803.3	38.8	2198.2	67.9	7.868	* 38.6	2151.2	67.2	14.269	7.846	0.681	16.9	-5.2
317	672	6.791	34.577	2338.	2273.	* 2296	* 844.4	41.4	2167.2	64.4	7.848	* 41.1	2168.4	63.5	15.879	7.822	0.644	12.6	-9.7
318	774	6.198	34.568	2333.	2274.	* 2308	* 913.2	48.7	2168.1	65.2	7.861	* 48.4	2169.4	64.2	14.765	7.831	0.650	12.4	-10.2
319	870	5.388	34.547	2344.	2271.	* 2308	* 788.7	36.6	2162.7	71.7	7.915	* 36.3	2164.2	70.5	13.161	7.881	0.714	17.9	-5.0
320	1063	4.329	34.568	2369.	2384.	* 2338	* 735.5	39.4	2196.3	68.3	7.900	* 38.9	2198.2	66.9	13.874	7.858	0.678	12.6	-10.8
321	1258	3.683	34.583	2389.	2327.	* 2347	* 740.1	48.7	2219.0	67.3	7.898	* 48.1	2221.3	65.6	14.212	7.847	0.665	9.6	-14.5
322	1589	3.868	34.681	2487.	2335.	* 2357	* 699.0	39.2	2229.4	70.4	7.922	* 38.5	2232.2	68.3	13.763	7.861	0.693	10.0	-14.8
323	1749	2.538	34.629	2415.	2347.	* 2365	* 688.7	39.4	2237.1	70.5	7.927	* 38.6	2240.3	68.1	13.923	7.856	0.691	7.4	-18.1
101	1999	2.265	34.648	2423.	2348.	* 2374	* 645.1	37.5	2236.5	74.0	7.951	* 36.6	2240.3	71.1	13.478	7.870	0.722	7.9	-18.3
324	2116	2.197	34.648	2438.	2345.	* 2374	* 621.0	36.0	2235.5	77.0	7.969	* 35.1	2240.0	73.9	13.049	7.884	0.751	9.5	-17.1
102	2227	2.016	34.654	2431.	2347.	* 2374	* 684.1	35.2	2233.3	78.5	7.988	* 34.2	2237.6	75.1	12.862	7.891	0.763	9.6	-17.4
103	2487	1.984	34.661	2434.	2348.	* 2369	* 594.1	34.8	2233.7	79.5	7.987	* 33.7	2238.5	75.8	12.949	7.888	0.770	7.7	-20.8
104	2789	1.758	34.668	2439.	2344.	* 2369	* 555.5	32.7	2227.1	84.2	8.014	* 31.5	2232.5	79.9	12.430	7.996	0.812	9.2	-19.4
105	2949	1.784	34.673	2435.	2333.	* 2365	* 526.1	31.0	2214.3	87.7	9.034	* 29.8	2228.2	83.8	12.188	7.917	0.943	9.4	-19.9
106	3185	1.628	34.676	2434.	2348.	* 2365	* 554.9	32.8	2223.7	83.5	8.813	* 31.5	2238.0	79.5	13.024	7.885	0.798	2.2	-28.0
107	3428	1.542	34.682	2438.	2339.	* 2351	* 535.1	31.9	2221.1	86.2	9.027	* 30.4	2227.9	80.7	12.869	7.890	0.821	1.4	-29.7
108	3669	1.488	34.698	2448.	2326.	* 2351	* 479.7	28.6	2203.3	94.0	8.971	* 27.2	2218.9	87.9	11.858	7.925	0.893	5.4	-26.6
109	3923	1.425	34.691	2448.	2329.	* 2358	* 498.5	29.2	2207.2	92.5	8.862	* 27.7	2215.3	86.0	12.427	7.986	0.874	0.2	-32.7
110	4136	1.444	34.691	2439.	2341.	* 2358	* 557.4	32.8	2223.3	85.7	9.025	* 30.3	2231.6	79.1	13.889	7.868	0.905	-9.6	-43.3
111	4377	1.472	34.691	2437.	2316.	* 2337	* 457.6	27.2	2191.0	97.7	8.889	* 25.6	2208.2	98.2	12.152	7.915	0.917	-2.0	-36.6
116	4638	1.583	34.692	2439.	2326.	* 2347	* 484.5	29.8	2203.7	93.5	8.867	* 27.8	2213.2	85.7	13.114	7.882	0.872	-10.3	-45.9
121	4769	1.519	34.693	2433.	2321.	* 2337	* 486.3	28.9	2199.3	92.8	8.865	* 27.1	2209.1	84.8	13.351	7.875	0.863	-13.1	-49.3

GEOSSECS PACIFIC STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
337	1	29	148	4 58.9 N	124 5.8 W	4276
337	3	29	3 74 2983	4 52.9 N	124 1.7 W	4156
337	4	29	3 74 1855	4 53.3 N	124 1.3 W	

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	MEASURED PARAMETERS				*CALC PARAMETERS P=1ATM.T=INSITU*				CALC PARAMETERS P.T=INSITU				DELTA CO3- (CALC)	DELTA CO3- (ARRG)			
				TALK (E-6)	TC02* (E-6)	TC02 (E-6)	CC (E-6)	PCO2 (ATM) (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3* (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3* (E-6)			PH	ICP (E-6)	
489	1	27.81	34.684	2283.	1958.	*	1978	* 374.2	18.1	1717.1	238.8	8.222	* 18.1	1717.1	238.8	5.992	8.222	2.341	185.6	165.3
411	56	26.54	34.742	2251.	1971.	*	1955	* 388.8	18.4	1733.1	227.4	8.216	* 18.4	1733.3	227.3	6.114	8.214	2.315	181.7	161.3
412	82	24.75	34.797	2252.	1957.	*		* 399.6	11.4	1775.4	218.2	8.193	* 11.4	1775.6	218.0	6.445	8.191	2.142	164.3	143.8
413	181	28.87	34.794	2291.	2074.	*	2181	* 492.8	16.8	1899.9	158.1	8.183	* 15.9	1888.2	157.9	7.959	8.099	1.610	111.8	91.2
415	147	13.26	34.557	2294.	2192.	*	2189	* 786.8	28.1	2868.9	93.8	7.948	* 28.1	2861.1	92.8	11.628	7.934	0.943	46.1	25.1
416	166	11.78	34.534	2257.	2155.	*		* 598.4	24.9	2842.9	181.2	8.888	* 24.8	2843.2	188.9	18.142	7.994	1.825	54.8	33.8
411	196	18.94	34.538	2381.	2176.	*	2282	* 593.4	25.3	2851.4	99.3	8.881	* 25.2	2851.8	99.8	18.146	7.994	1.885	51.8	38.7
415	258	9.35	34.673	2384.	2281.	*	2232	* 667.8	29.4	2884.5	87.1	7.951	* 29.3	2885.8	86.7	11.441	7.942	0.881	39.8	17.8
428	259	5.69	34.677	2388.	2226.	*		* 774.8	34.4	2115.1	76.5	7.891	* 34.3	2115.6	76.1	13.178	7.888	0.774	28.2	6.8
381	387	9.646	34.578	2383.	2232.	*	2253	* 837.3	37.2	2123.7	71.1	7.899	* 37.1	2124.2	78.7	14.219	7.847	0.718	22.6	1.3
382	355	9.246	34.667	2389.	2228.	*		* 765.4	34.5	2117.7	75.8	7.894	* 34.4	2118.3	75.3	13.157	7.881	0.766	26.9	5.5
383	465	8.992	34.656	2389.	2233.	*	2261	* 787.5	35.8	2123.8	73.4	7.882	* 35.6	2124.5	72.8	13.683	7.866	0.748	24.1	2.5
386	482	8.323	34.538	2313.	2261.	*		* 926.7	43.1	2155.6	62.3	7.814	* 42.9	2156.4	61.7	16.838	7.795	0.626	12.3	-9.5
385	486	8.358	34.629	2314.	2264.	*	2257	* 948.1	43.8	2158.8	61.4	7.888	* 43.6	2159.7	68.8	16.251	7.789	0.517	11.4	-18.4
387	561	7.399	34.595	2324.	2296.	*	2328	* 1888.3	52.3	2129.3	52.5	7.746	* 52.8	2192.2	51.4	18.895	7.724	0.521	1.4	-28.7
388	644	6.453	34.565	2327.	2298.	*		* 1842.7	51.8	2193.5	52.7	7.768	* 51.4	2194.6	52.8	18.451	7.734	0.527	1.2	-21.8
385	722	5.873	34.552	2337.	2295.	*	2323	* 921.5	46.7	2198.4	57.9	7.818	* 46.3	2191.6	57.1	16.565	7.781	0.578	5.7	-16.8
311	889	5.891	34.553	2345.	2318.	*	2335	* 928.5	48.8	2285.3	56.8	7.889	* 47.5	2286.8	55.7	16.869	7.773	0.564	2.9	-28.8
312	979	4.768	34.553	2353.	2318.	*		* 948.6	45.6	2213.2	55.2	7.795	* 49.1	2214.8	54.1	17.481	7.759	0.548	8.5	-22.7
316	988	4.729	34.554	2357.	2318.	*		* 911.8	48.1	2213.8	56.9	7.813	* 47.6	2214.7	55.7	16.872	7.773	0.564	2.8	-21.2
317	1883	4.326	34.568	2378.	2329.	*	2357	* 861.1	46.1	2219.3	59.6	7.836	* 45.6	2221.2	58.3	16.125	7.793	0.598	3.8	-19.7
315	1327	3.524	34.588	2388.	2343.	*	2358	* 946.8	46.5	2236.6	59.9	7.843	* 45.8	2238.9	58.3	16.236	7.798	0.591	1.6	-22.6
328	1465	3.195	34.682	2395.	2337.	*		* 754.7	42.1	2229.2	65.7	7.889	* 41.4	2231.9	63.7	14.797	7.838	0.646	5.7	-18.9
321	1465	3.156	34.682	2398.	2341.	*	2373	* 768.9	42.5	2233.3	65.2	7.886	* 41.8	2236.8	63.3	14.892	7.827	0.642	5.3	-19.4
322	1618	2.929	34.611	2399.	2343.	*		* 759.6	42.8	2235.4	64.7	7.886	* 42.8	2239.3	62.6	15.118	7.821	0.635	3.2	-21.3
181	1797	2.659	34.623	2412.	2353.	*	2372	* 739.4	42.1	2244.6	66.3	7.898	* 41.2	2247.8	63.9	14.948	7.826	0.649	2.9	-22.7
182	1981	2.372	34.637	2422.	2349.	*	2367	* 661.6	38.1	2237.9	73.8	7.943	* 37.2	2241.6	78.2	13.687	7.864	0.713	7.2	-19.8
324	2856	2.388	34.641	2419.	2347.	*		* 663.8	38.3	2236.2	72.5	7.941	* 37.4	2248.1	69.6	13.855	7.858	0.787	5.8	-28.6
183	2188	2.147	34.645	2427.	2358.	*		* 638.4	37.8	2237.9	75.8	7.957	* 36.1	2242.1	71.9	13.491	7.878	0.738	6.8	-28.8
185	2579	1.894	34.663	2435.	2345.	*		* 577.1	33.3	2229.7	81.5	7.998	* 32.7	2234.7	77.6	12.729	7.895	0.788	8.3	-19.8
186	2776	1.837	34.667	2436.	2353.	*		* 686.5	35.6	2239.3	78.1	7.978	* 34.4	2244.7	74.8	13.588	7.867	0.752	2.5	-26.3
187	2975	1.758	34.678	2436.	2362.	*	2377	* 647.3	38.1	2258.2	73.8	7.952	* 36.7	2255.8	69.5	14.732	7.832	0.786	-4.3	-33.7
188	3174	1.665	34.677	2436.	2355.	*		* 529.3	31.3	2216.6	87.2	8.832	* 38.8	2222.9	82.1	12.433	7.985	0.834	5.9	-24.2
189	3373	1.564	34.692	2437.	2342.	*	2362	* 558.4	32.6	2225.3	84.1	8.816	* 31.2	2232.8	78.8	13.146	7.881	0.881	8.1	-38.7
118	3571	1.518	34.684	2437.	2355.	*	2348	* 684.8	35.9	2241.5	77.6	7.979	* 34.3	2248.4	72.3	14.629	7.935	0.735	-8.9	-48.5
111	3771	1.478	34.687	2431.	2326.	*	2347	* 589.4	38.3	2286.6	89.1	8.846	* 28.8	2214.2	33.8	12.733	7.895	0.844	-8.8	-33.1
112	3954	1.461	34.688	2433.	2333.	*		* 528.2	31.4	2215.8	86.6	8.831	* 29.9	2222.9	80.2	13.387	7.873	0.816	-6.8	-39.8
122	4248	1.488	34.689	2438.	2323.	*	2355	* 581.9	29.8	2283.1	88.1	8.851	* 28.2	2211.7	83.1	13.124	7.882	0.845	-7.2	-41.3

CARBONATE REPORT

GEOSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 348 1 1 6 74 0943 18 28.7 N 123 38.5 W 4536
 348 2 1 6 74 1304 18 29.8 N 123 39.2 W

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/100)	TALK (EQ/KG)	TIT		CALC PARAMETERS P=IATH,T=INSITU					CALC PARAMETERS P.T=INSITU					DELTA CO3- (CALC)	DELTA CO3- (ARAG)	
					TC02* (M/KG)	TC02** (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH			ICP (E-6)
202	8	26.01	34.226	2201.	1989.	* 1930	* 316.9	8.6	1652.8	248.4	9.278	* 0.6	1652.8	248.4	5.278	8.278	2.492	203.2	192.9
203	41	16.89	34.654	2237.	2148.	* 2181	* 685.9	24.3	2013.9	189.8	7.965	* 24.3	2014.8	189.7	18.970	7.964	1.114	63.8	43.2
204	77	13.40	34.720	2294.	2217.	*	* 926.3	36.5	2185.2	75.3	7.833	* 36.5	2185.3	75.2	14.786	7.830	8.766	29.0	0.2
205	102	12.47	34.797	2308.	2239.	* 2253	* 1014.1	41.1	2130.3	67.6	7.793	* 41.1	2130.5	67.5	16.243	7.789	8.680	21.8	8.2
200	140	11.51	34.765	2303.	2239.	*	* 957.6	39.9	2130.5	58.6	7.813	* 39.9	2130.7	58.4	15.566	7.800	8.697	21.6	8.7
207	194	11.82	34.739	2388.	2227.	* 2277	* 871.7	37.0	2117.4	72.5	7.848	* 37.0	2117.7	72.3	14.435	7.841	8.736	25.1	4.1
200	256	10.47	34.723	2306.	2250.	*	* 975.2	42.2	2143.2	64.6	7.901	* 42.1	2143.6	64.3	16.164	7.791	8.655	16.7	-4.5
209	411	9.10	34.653	2316.	2201.	* 2317	* 1896.2	49.7	2175.0	55.5	7.749	* 49.5	2176.5	55.1	19.483	7.733	8.559	6.3	-15.3
210	513	7.95	34.591	2323.	2280.	*	* 1050.4	49.5	2183.2	53.3	7.763	* 49.3	2184.0	54.0	18.886	7.743	8.555	5.1	-16.7
211	616	6.91	34.565	2341.	2311.	* 2350	* 1050.8	51.7	2205.7	53.5	7.750	* 51.4	2206.8	52.8	10.478	7.734	8.535	2.3	-19.8
212	710	6.840	34.540	2346.	2321.	*	* 1007.7	53.8	2215.7	51.5	7.752	* 53.4	2216.9	50.7	10.935	7.723	8.513	-0.6	-23.1
213	820	5.44	34.542	2351.	2325.	* 2341	* 1037.6	53.4	2219.7	51.9	7.761	* 53.8	2221.0	51.0	10.694	7.720	8.517	-1.2	-23.9
214	923	4.92	34.547	2363.	2330.	*	* 966.3	50.7	2224.6	54.7	7.790	* 50.2	2226.2	53.7	17.655	7.753	8.543	0.6	-22.5
215	1025	4.46	34.561	2360.	2338.	* 2300	* 974.7	51.9	2232.5	53.6	7.706	* 51.4	2234.2	52.4	10.831	7.744	8.531	-1.6	-24.9
210	1177	4.001	34.572	2378.	2350.	*	* 977.8	53.8	2244.8	48.4	7.704	* 52.4	2246.0	51.7	10.378	7.736	8.524	-3.6	-27.4
217	1431	3.292	34.593	2397.	2361.	* 2307	* 900.4	58.1	2254.5	56.4	7.818	* 49.4	2257.8	54.7	17.482	7.759	8.554	-3.8	-27.5
218	1601	2.74	34.616	2415.	2368.	*	* 815.8	46.3	2260.4	61.3	7.859	* 45.5	2263.4	59.1	16.206	7.790	8.600	-8.9	-26.2
219	1929	2.320	34.638	2420.	2372.	* 2392	* 799.2	46.1	2264.2	61.8	7.866	* 45.1	2267.6	59.3	16.316	7.707	8.602	-3.2	-29.2
101	2001	2.142	34.647	2431.	2355.	* 2391	* 644.4	37.4	2242.9	74.7	7.954	* 36.5	2246.9	71.5	13.466	7.871	8.728	7.6	-18.9
220	2204	1.944	34.650	2431.	2300.	*	* 664.1	38.0	2248.9	72.3	7.941	* 37.8	2253.2	69.0	14.151	7.849	8.701	2.9	-24.3
102	2330	1.941	34.659	2437.	2352.	*	* 680.2	35.1	2237.0	79.1	7.983	* 34.1	2242.3	75.6	12.880	7.898	8.760	9.8	-18.3
103	2531	1.869	34.664	2439.	2354.	* 2372	* 599.6	35.2	2239.7	79.2	7.983	* 34.0	2244.6	75.4	13.120	7.802	8.766	6.6	-21.4
104	2731	1.795	34.667	2439.	2364.	*	* 643.7	37.8	2251.9	74.3	7.955	* 36.6	2257.0	70.4	14.384	7.845	8.715	-8.6	-29.3
105	2930	1.715	34.672	2441.	2347.	* 2363	* 550.8	33.0	2238.4	83.7	8.011	* 31.7	2236.2	79.1	12.756	7.894	8.884	5.8	-23.5
106	3127	1.533	34.679	2439.	2345.	*	* 556.5	32.9	2229.5	83.6	8.012	* 31.6	2234.6	78.7	12.964	7.807	8.881	3.1	-25.9
107	3327	1.562	34.679	2438.	2349.	* 2351	* 575.2	34.1	2233.8	81.1	7.999	* 32.7	2240.3	76.8	13.640	7.865	8.773	-2.1	-32.0
108	3520	1.517	34.683	2436.	2338.	*	* 537.8	32.8	2220.4	85.6	8.025	* 30.5	2227.5	80.0	13.864	7.884	8.814	-8.6	-32.0
109	3725	1.473	34.686	2435.	2333.	* 2350	* 521.5	31.8	2214.3	87.6	8.037	* 29.5	2221.0	81.6	12.937	7.900	8.830	-1.5	-33.7
110	3918	1.431	34.689	2438.	2317.	*	* 480.7	28.7	2195.1	93.3	8.068	* 27.2	2203.1	86.7	12.235	7.912	8.882	1.8	-31.9
111	4110	1.423	34.691	2423.	2313.	* 2321	* 510.8	29.4	2208.2	88.4	8.044	* 28.8	2208.5	81.8	13.213	7.879	8.831	-6.7	-40.4
116	4327	1.442	34.691	2427.	2317.	*	* 490.3	29.2	2196.1	91.6	8.068	* 27.6	2205.0	84.5	12.960	7.807	8.859	-7.8	-41.4
122	4513	1.460	34.691	2420.	2327.	* 2345	* 522.9	31.1	2200.9	86.9	8.035	* 29.3	2217.9	79.7	13.990	7.854	8.811	-14.4	-49.6

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE LATITUDE LONGITUDE SOT DEPTH
 343 2 3 5 74 3458 16 31.8 N 123 1.4 W 4225
 343 5 4 5 74 3458 16 32.0 N 123 7.0 W 4252

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8.08)	MEASURED PARAMETERS		CALC PARAMETERS P=1 ATM. T=INSITU								CALC PARAMETERS P,T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (M/KG)				
				TALK (M/KG)	GC (E-6)	TC02* (M/KG)	TC02 (E-6)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH			PH	ICP (E-6)	(E-6)	(E-6)
581	13	22.468	34.612	2293.	1957.	*	1969	*	297.7	9.8	1711.6	236.4	8.292	*	9.8	1711.6	236.3	5.116	8.291	2.398	198.9	178.5
582	43	22.263	34.628	2307.	1966.	*			292.3	8.9	1716.9	248.1	8.299	*	8.9	1717.1	248.8	5.835	8.298	2.436	194.4	173.9
583	73	28.419	34.634	2386.	1981.	*	2882	*	291.3	9.3	1745.2	228.5	8.296	*	9.3	1743.4	229.3	5.885	8.294	2.318	192.4	161.8
584	103	17.431	34.279	2283.	2835.	*			365.8	12.8	1845.7	176.5	9.206	*	12.8	1846.8	176.3	6.279	8.282	1.771	138.8	109.3
585	142	12.549	33.978	2268.	2189.	*	2115	*	589.5	28.7	1974.2	114.1	9.862	*	28.7	1974.5	113.8	8.788	8.856	1.134	67.1	46.2
586	167	12.123	34.381	2284.	2288.	*			922.8	33.8	2888.2	77.9	7.874	*	33.8	2888.5	77.7	13.549	7.968	8.783	38.8	9.8
587	196	12.178	34.698	2384.	2239.	*	2274	*	972.1	39.8	2129.8	69.4	7.818	*	39.7	2138.1	69.2	15.758	7.983	8.784	22.1	1.8
588	226	11.719	34.717	2315.	2258.	*			1821.7	42.5	2149.7	65.8	7.798	*	42.4	2158.1	65.5	16.555	7.781	8.667	18.2	-2.9
589	276	18.714	34.683	2316.	2277.	*	2293	*	1131.9	48.6	2178.6	57.8	7.744	*	48.5	2171.1	57.5	18.493	7.733	8.584	9.7	-11.5
518	324	9.933	34.648	2315.	2293.	*			1159.3	51.1	2177.3	54.6	7.738	*	58.9	2177.8	54.3	19.164	7.718	8.552	6.2	-13.2
511	373	8.975	34.568	2321.	2286.	*	2386	*	1891.6	49.7	2188.7	55.6	7.752	*	49.5	2181.3	55.2	18.323	7.737	8.559	6.7	-14.9
512	429	8.313	34.534	2321.	2297.	*			1162.6	54.1	2191.6	51.3	7.723	*	53.8	2192.3	50.8	19.691	7.786	8.514	1.8	-19.9
516	496	7.428	34.511	2326.	2311.	*	2311	*	1289.7	59.1	2285.1	47.8	7.783	*	57.8	2285.9	47.3	28.735	7.683	8.478	-2.3	-24.1
517	598	6.556	34.588	2343.	2327.	*			1168.6	57.8	2228.9	48.3	7.716	*	57.5	2221.8	47.7	28.296	7.593	8.482	-2.6	-24.8
518	598	5.881	34.586	2343.	2336.	*	2351	*	1166.3	59.3	2229.5	47.3	7.715	*	58.9	2238.6	46.5	28.577	7.687	8.471	-4.6	-27.8
519	791	5.187	34.514	2356.	2331.	*			1837.1	53.9	2225.6	51.6	7.761	*	53.5	2226.9	58.7	18.647	7.729	8.513	-1.3	-24.8
520	884	4.757	34.524	2378.	2348.	*	2368	*	1858.8	53.4	2241.9	58.6	7.756	*	55.8	2243.4	49.6	19.832	7.721	8.582	-3.2	-26.1
521	1033	4.148	34.544	2379.	2358.	*			975.6	52.6	2244.8	53.4	7.786	*	52.1	2245.7	52.4	18.844	7.744	8.538	-1.7	-25.1
522	1188	3.882	34.568	2388.	2356.	*	2378	*	939.2	51.5	2249.8	54.7	7.881	*	58.9	2251.8	53.3	17.673	7.753	8.548	-2.1	-25.9
523	1376	3.165	34.593	2485.	2365.	*	2378	*	971.4	48.7	2258.1	58.2	7.832	*	48.8	2268.5	56.5	16.749	7.776	8.573	-8.7	-25.1
281	1576	2.847	34.598	2418.	2368.	*	2353	*	849.6	48.8	2268.9	59.1	7.842	*	47.2	2263.7	57.1	16.698	7.778	8.579	-1.9	-26.9
524	1672	2.538	34.616	2418.	2366.	*	2387	*	788.1	44.6	2257.9	63.5	7.976	*	43.8	2268.9	61.3	15.536	7.889	8.622	1.3	-23.9
282	1774	3.441	34.621	2421.	2364.	*			748.1	42.9	2255.4	65.6	7.894	*	42.1	2258.7	63.3	15.872	7.822	8.642	2.3	-23.3
283	1975	2.157	34.538	2427.	2366.	*	2374	*	728.9	41.8	2256.6	67.6	7.988	*	48.9	2268.2	64.9	14.844	7.828	8.659	2.8	-24.2
284	2174	1.953	34.648	2433.	2375.	*			733.9	42.9	2263.7	66.4	7.981	*	41.8	2269.7	63.4	15.383	7.813	8.544	-1.6	-29.4
285	2374	1.936	34.554	2432.	2356.	*	2353	*	636.9	37.4	2244.8	74.6	7.958	*	36.3	2248.6	71.1	13.727	7.862	8.723	4.8	-23.5
286	2578	1.743	34.661	2435.	2358.	*			631.4	37.2	2245.6	75.2	7.962	*	36.8	2258.6	71.4	13.966	7.858	8.726	2.2	-25.9
287	2769	1.663	34.667	2437.	2361.	*	2353	*	634.4	37.5	2248.8	74.7	7.968	*	36.2	2254.1	78.6	14.193	7.848	8.718	-8.8	-29.6
288	2967	1.688	34.671	2448.	2355.	*			594.1	35.2	2248.6	79.2	7.986	*	33.9	2246.4	74.7	13.581	7.867	8.759	1.8	-28.5
289	3219	1.554	34.676	2448.	2358.	*			571.4	33.9	2234.5	81.6	8.882	*	32.5	2248.8	76.7	13.489	7.873	8.779	-8.1	-38.4
218	3511	1.528	34.678	2439.	2363.	*	2353	*	632.1	37.5	2258.8	74.7	7.961	*	36.8	2257.4	69.6	15.174	7.819	8.788	-18.8	-42.1
211	3717	1.529	34.588	2437.	2358.	*	2352	*	617.8	36.7	2245.2	76.1	7.978	*	35.8	2252.3	78.7	15.148	7.828	8.718	-12.4	-44.5
212	3939	1.588	34.584	2437.	2359.	*			621.9	37.8	2246.4	75.6	7.967	*	35.2	2253.9	69.9	15.578	7.988	8.718	-16.1	-49.8
222	4197	1.588	34.684	2432.	2339.	*			555.6	33.8	2223.1	82.9	9.811	*	31.3	2231.3	76.4	14.346	7.843	8.777	-13.8	-46.9

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 345 1 5 5 74 0844 22 31.5 N 122 12.9 W 4224
 345 3 5 5 74 1514 22 38.8 N 122 14.0 W 4125

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EO/KG)	TIT (E-6)	GC TC02* (M/KG)	*CALC PARAMETERS P.=1ATH.T=INSITU*				CALC PARAMETERS P.T=INSITU				DELTA CO3= (M/KG)	DELTA CO3= (ARAG)			
							PC02 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)			PH	ICP (E-6)	
301	11	10.420	34.157	2295.	2007.	* 2020	* 325.0	11.1	1799.3	196.6	8.250	* 11.1	1799.3	196.6	5.625	8.250	1.968	151.8	138.5
302	57	16.921	33.950	2270.	1990.	* 2019	* 308.6	11.0	1795.5	191.5	8.264	* 11.8	1795.7	191.4	5.471	8.262	1.905	145.3	124.7
303	117	14.334	33.056	2254.	2005.	* *	* 386.8	11.8	1818.5	174.8	8.250	* 11.9	1818.7	174.5	5.570	8.254	1.732	120.1	107.3
304	136	12.530	33.775	2245.	2029.	* 2057	* 336.8	13.7	1862.4	152.9	8.217	* 13.7	1862.7	152.6	6.141	8.212	1.511	106.0	95.1
305	166	10.725	33.005	2250.	2120.	* *	* 512.7	22.1	1992.2	105.7	8.052	* 22.1	1992.5	105.4	9.883	8.046	1.047	50.3	37.3
306	274	9.622	34.296	2200.	2220.	* 2253	* 942.3	37.6	2113.8	69.4	7.855	* 37.5	2113.5	69.8	14.305	7.845	0.694	21.2	-0.1
307	343	8.312	34.286	2294.	2242.	* *	* 910.2	42.4	2137.7	61.0	7.819	* 42.3	2138.3	61.4	15.649	7.806	0.617	13.0	-9.4
308	424	7.467	34.364	2313.	2295.	* 2292	* 1126.6	54.8	2105.6	50.4	7.731	* 53.0	2106.2	49.9	19.324	7.714	0.503	0.9	-20.9
309	505	6.411	34.320	2322.	2304.	* *	* 1138.2	56.3	2199.2	48.5	7.726	* 56.8	2200.8	48.0	19.683	7.706	0.483	-1.7	-23.6
310	504	6.156	34.417	2336.	2320.	* 2346	* 1146.6	57.6	2214.3	48.1	7.721	* 57.3	2215.2	47.5	20.059	7.690	0.479	-2.8	-24.9
311	503	5.570	34.452	2352.	2341.	* *	* 1175.2	60.2	2234.2	46.6	7.711	* 59.9	2235.3	45.9	20.733	7.683	0.463	-5.3	-27.7
312	796	5.064	34.469	2362.	2341.	* 2377	* 1067.6	55.7	2235.1	50.2	7.758	* 55.3	2236.4	49.3	19.134	7.718	0.499	-2.6	-25.3
316	894	4.509	34.500	2371.	2352.	* *	* 1066.2	56.7	2243.7	49.5	7.758	* 56.3	2247.2	48.5	19.361	7.713	0.491	-4.4	-27.3
317	995	4.193	34.511	2375.	2354.	* 2305	* 1030.8	55.9	2247.8	50.3	7.760	* 55.4	2249.4	49.2	19.105	7.719	0.490	-4.6	-27.9
318	1092	3.954	34.529	2386.	2360.	* 2396	* 1055.6	57.5	2261.8	49.4	7.753	* 57.0	2262.0	48.2	19.573	7.700	0.480	-6.4	-29.9
319	1194	3.566	34.550	2391.	2365.	* *	* 981.6	54.1	2250.5	52.5	7.703	* 53.4	2260.5	51.0	10.462	7.734	0.517	-4.5	-20.3
320	1291	3.340	34.561	2390.	2366.	* *	* 931.2	51.7	2259.5	54.9	7.804	* 51.0	2261.7	53.3	17.712	7.752	0.540	-3.1	-27.2
321	1300	3.122	34.570	2400.	2370.	* 2386	* 942.6	52.0	2270.9	54.3	7.800	* 52.0	2273.3	52.6	10.060	7.743	0.533	-4.7	-29.1
322	1409	2.911	34.599	2411.	2372.	* *	* 872.2	49.2	2264.9	57.9	7.831	* 48.4	2267.5	56.0	16.953	7.771	0.560	-2.2	-26.9
323	1500	2.754	34.596	2411.	2370.	* 2396	* 853.4	48.4	2262.9	50.7	7.840	* 47.6	2265.7	56.7	16.795	7.775	0.575	-2.5	-27.5
181	1704	2.334	34.619	2421.	2370.	* 2380	* 791.3	45.0	2261.9	63.1	7.875	* 44.1	2265.1	60.0	15.743	7.803	0.617	-0.3	-25.9
324	1007	2.275	34.522	2427.	2369.	* *	* 740.2	42.7	2260.0	66.2	7.890	* 41.0	2263.5	63.7	15.073	7.822	0.647	1.6	-24.3
102	1904	2.127	34.633	2430.	2367.	* *	* 709.9	41.2	2257.2	60.6	7.915	* 40.3	2260.9	65.0	14.627	7.835	0.660	2.0	-23.5
103	2103	1.942	34.646	2435.	2370.	* 2361	* 695.5	40.7	2259.0	69.5	7.923	* 39.6	2263.9	66.5	14.619	7.835	0.675	1.4	-25.5
104	2303	1.015	34.655	2436.	2368.	* *	* 677.3	39.0	2257.3	70.9	7.934	* 38.7	2261.0	67.6	14.543	7.837	0.686	0.3	-27.2
105	2501	1.724	34.661	2439.	2361.	* 2351	* 627.0	37.0	2248.2	75.0	7.964	* 35.3	2253.2	72.0	13.709	7.360	0.731	2.6	-25.0
106	2700	1.639	34.667	2440.	2354.	* *	* 589.9	34.9	2239.5	79.6	7.989	* 33.7	2244.9	75.4	13.253	7.070	0.766	3.0	-25.0
107	2970	1.567	34.671	2430.	2359.	* 2346	* 619.2	36.7	2246.1	76.2	7.969	* 35.4	2251.0	71.0	14.156	7.049	0.730	-2.1	-31.6
100	3177	1.527	34.674	2439.	2351.	* *	* 579.0	34.4	2236.0	80.6	7.996	* 33.0	2242.2	75.0	13.535	7.069	0.770	-0.5	-30.7
109	3376	1.506	34.677	2441.	2349.	* 2343	* 563.0	33.5	2232.0	82.7	8.000	* 32.0	2239.5	77.5	13.422	7.073	0.790	-1.2	-32.1
110	3577	1.503	34.670	2440.	2351.	* *	* 574.5	34.2	2235.7	81.1	7.999	* 32.6	2242.7	75.6	13.944	7.056	0.769	-5.6	-37.2
111	3775	1.510	34.601	2440.	2343.	* 2334	* 562.4	33.4	2231.9	82.6	8.000	* 31.0	2239.4	76.0	13.921	7.056	0.791	-7.0	-39.3
112	3974	1.525	34.601	2441.	2349.	* *	* 563.4	33.5	2232.0	92.7	8.007	* 31.0	2240.7	76.6	14.196	7.040	0.770	-9.9	-43.0
122	4203	1.540	34.601	2439.	2351.	* 2355	* 579.7	34.4	2236.0	80.6	7.996	* 32.6	2244.2	74.2	14.906	7.027	0.755	-15.4	-49.3

CARBONATE REPORT

GEOSSECS PACIFIC STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 347 1 9 6 74 1794 29 30.8 N 121 29.2 W 4286
 347 3 9 6 74 2335 29 31.4 N 121 29.7 W

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS				*CALC PARAMETERS P=1ATH,T=INSITU*								CALC. PARAMETERS P.T=INSITU					DELTA	DELTA					
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (E-08)	TALK (E-04)	TIT (E-6)	GC TC02* (E-6)	TC02 (E-6)	PC02 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	AM (E-9)	PH	ICP (E-6)	CO3= (E-6)	CO3= (E-6)	CO3= (E-6)	CO3= (E-6)	
302	20	17.00	33.651	2255.	1991.	* 2000	* 315.0	11.2	1793.4	186.4	8.253	* 11.2	1793.5	186.3	5.567	8.254	1.838	140.6	120.1				
309	199	9.55	33.923	2260.	2125.	* 2142	* 499.7	22.4	1999.0	103.6	8.850	* 22.3	1999.4	103.3	8.800	8.851	1.827	56.1	35.8				
101	336	7.727	34.219	2302.	2259.	* 2343	* 959.8	45.7	2155.3	50.1	7.796	* 45.5	2155.8	57.7	16.482	7.793	8.579	9.3	-12.2				
102	589	6.812	34.351	2341.	2323.	* 2343	* 1122.6	56.7	2217.5	48.0	7.730	* 56.4	2219.5	48.2	19.653	7.787	8.486	-2.2	-24.3				
103	739	5.846	34.423	2353.	2344.	* 2354	* 1170.8	61.1	2237.1	45.8	7.711	* 60.7	2238.2	45.0	20.869	7.690	8.454	-6.6	-29.1				
104	890	4.420	34.458	2373.	2347.	*	* 1005.0	53.7	2241.2	52.1	7.774	* 53.2	2242.7	51.2	18.287	7.730	8.517	-1.7	-24.7				
105	1000	3.700	34.511	2307.	2361.	*	* 987.5	54.8	2254.7	52.4	7.781	* 53.4	2256.5	51.1	18.360	7.736	8.517	-3.5	-27.8				
100	1200	3.329	34.544	2397.	2374.	* 2398	* 999.2	55.5	2267.8	51.5	7.775	* 54.8	2269.2	50.8	18.953	7.722	8.506	-6.4	-30.5				
107	1400	2.942	34.571	2410.	2378.	* 2309	* 922.1	52.8	2271.8	55.1	7.809	* 51.2	2273.5	53.3	17.875	7.748	8.541	-4.9	-29.6				
100	1600	2.549	34.601	2420.	2377.	*	* 837.6	47.9	2269.4	59.7	7.848	* 47.8	2272.4	57.6	16.632	7.779	8.584	-2.6	-27.9				
109	1006	2.266	34.622	2420.	2375.	*	* 770.1	44.5	2266.4	64.1	7.882	* 43.6	2269.8	61.6	15.645	7.806	8.626	-0.4	-26.3				
110	2004	2.047	34.630	2420.	2367.	* 2384	* 717.8	41.8	2257.6	67.6	7.910	* 40.8	2261.4	64.7	14.940	7.825	8.657	8.7	-25.9				
112	2295	1.914	34.651	2430.	2380.	*	* 600.0	39.0	2257.2	71.0	7.933	* 38.7	2261.5	67.7	14.447	7.840	8.680	1.6	-25.6				
111	2207	1.912	34.651	2435.	2360.	* 2382	* 644.5	37.7	2240.1	74.2	7.954	* 36.7	2252.4	70.9	13.742	7.862	8.720	4.7	-22.5				
116	2493	1.800	34.659	2435.	2372.	*	* 703.8	41.3	2262.8	68.6	7.918	* 40.1	2266.7	65.2	15.233	7.817	8.662	-3.2	-31.1				
117	2494	1.800	34.660	2434.	2362.	*	* 656.8	38.6	2258.6	72.8	7.946	* 37.5	2255.3	69.2	14.288	7.845	8.703	0.0	-27.0				
110	2693	1.710	34.667	2440.	2367.	* 2375	* 651.9	39.5	2255.1	73.4	7.949	* 37.2	2260.2	69.6	14.437	7.841	8.707	-1.1	-29.6				
119	2693	1.710	34.666	2437.	2355.	*	* 609.1	35.9	2241.4	77.7	7.976	* 34.7	2246.6	73.7	13.555	7.860	8.749	3.1	-25.4				
120	2091	1.662	34.670	2441.	2363.	*	* 627.5	37.1	2250.1	75.8	7.965	* 35.8	2255.6	71.6	14.105	7.840	8.720	-1.3	-30.4				
121	2092	1.662	34.671	2442.	2366.	*	* 637.2	37.6	2253.4	74.9	7.959	* 36.3	2259.8	70.7	14.389	7.842	8.710	-2.2	-31.4				
122	3192	1.595	34.676	2435.	2349.	* 2356	* 587.5	34.9	2234.7	79.5	7.990	* 33.4	2240.9	74.7	13.753	7.062	8.759	-1.7	-31.9				
123	3698	1.547	34.682	2442.	2347.	* 2371	* 551.4	32.7	2238.1	94.2	8.016	* 31.2	2237.4	73.4	13.535	7.363	8.797	-4.3	-56.3				
124	4253	1.564	34.686	2453.	2346.	* 2362	* 563.0	33.4	2238.0	82.6	8.007	* 31.6	2238.4	76.0	14.571	7.337	8.773	-14.3	-40.4				

Table 3

The Indian Ocean

17

18

19

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 484 1 9 12 77 0737 35 35.9 N 17 15.2 E 4838

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATM,T=INSITU*						CALC PARAMETERS P,T=INSITU							
SAMP NO	DEPTH (M)	TEMP (C)	SAL (P.00)	TALK (EO/KG)	TIT TC02 (E-6)	GC TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
101	26	17.546	37.988	2536.	2196.	*	* 321.7	11.0	1946.2	238.8	8.275	* 11.0	1946.3	238.7	5.317	9.274	2.658	193.8	173.6
102	79	16.535	38.336	2588.	2235.	*	* 315.5	11.1	1981.6	242.3	8.285	* 11.1	1981.8	242.1	5.226	8.282	2.721	197.8	175.7
103	89	15.868	38.429	2592.	2257.	*	* 323.9	11.6	2009.9	235.6	8.275	* 11.6	2010.1	235.3	5.345	8.272	2.651	198.2	169.9
104	135	14.578	38.683	2621.	2294.	*	* 325.8	12.1	2051.8	238.1	8.274	* 12.1	2052.2	229.7	5.384	8.269	2.599	184.2	163.9
105	148	14.575	38.638	2616.	2388.	*	* 341.1	12.7	2064.6	222.8	8.256	* 12.7	2065.8	222.4	5.618	8.251	2.519	176.8	156.5
106	164	15.871	38.988	2625.	2298.	*	* 336.2	12.3	2055.6	238.1	8.263	* 12.3	2056.1	229.6	5.538	8.257	2.617	184.2	163.8
107	193	14.697	38.928	2631.	2313.	*	* 345.1	12.8	2076.8	224.2	8.254	* 12.7	2076.5	223.7	5.668	8.247	2.546	178.8	157.6
108	344	14.261	38.818	2635.	2321.	*	* 345.9	13.8	2086.5	221.5	8.252	* 12.9	2087.5	228.6	5.748	8.248	2.518	173.9	153.2
109	492	14.837	38.795	2622.	2313.	*	* 346.1	13.1	2082.3	217.6	8.258	* 13.0	2083.7	216.3	5.858	8.233	2.468	168.6	147.5
110	663	13.826	38.758	2627.	2311.	*	* 342.9	13.8	2085.5	218.5	8.254	* 12.9	2087.4	216.7	5.882	8.238	2.462	167.8	146.4
111	841	13.733	38.731	2614.	2309.	*	* 345.5	13.2	2081.1	214.7	9.249	* 13.8	2083.5	212.5	6.832	8.228	2.413	162.4	148.6
112	1092	13.658	38.711	2624.	2311.	*	* 333.1	12.8	2077.8	228.4	8.261	* 12.6	2081.8	217.5	5.986	8.223	2.468	165.5	143.1
114	1181	13.658	38.718	2621.	2314.	*	* 343.2	13.1	2084.6	216.3	8.252	* 12.9	2087.7	213.4	6.115	8.214	2.422	161.4	139.8
115	1333	13.642	38.781	2611.	2388.	*	* 346.8	13.2	2081.5	213.3	8.248	* 13.0	2085.2	289.8	6.292	8.281	2.388	156.8	133.1
116	1626	13.537	38.698	2618.	2314.	*	* 346.3	13.2	2086.5	214.3	8.248	* 12.9	2091.1	218.8	6.434	8.191	2.382	153.9	138.4
117	1965	13.645	38.688	2615.	2388.	*	* 341.3	13.1	2078.7	216.2	9.253	* 12.7	2084.3	211.8	6.541	8.184	2.393	152.2	127.9
118	2351	13.671	38.672	2621.	2317.	*	* 347.6	13.3	2089.3	214.5	8.248	* 12.8	2095.9	288.3	6.835	8.165	2.361	146.2	128.9
119	2739	13.712	38.667	2619.	2387.	*	* 335.2	12.8	2074.7	219.5	8.261	* 12.3	2082.5	212.2	6.842	8.165	2.485	146.7	128.4
120	3084	13.759	38.663	2619.	2315.	*	* 348.5	13.3	2087.2	214.5	9.247	* 12.7	2095.9	286.4	7.269	8.139	2.339	137.6	118.5
121	3283	13.795	38.663	2620.	2329.	*	* 378.4	14.1	2188.7	286.2	9.225	* 13.4	2117.8	197.9	7.771	8.118	2.242	127.1	99.4
122	3479	13.932	38.663	2618.	2313.	*	* 347.7	13.2	2084.6	215.1	8.248	* 12.5	2094.5	286.8	7.487	8.126	2.335	133.3	105.1
123	3776	13.989	38.663	2622.	2312.	*	* 341.7	13.8	2088.5	218.5	8.255	* 12.3	2091.3	288.4	7.544	8.122	2.363	132.7	103.7
124	4011	13.954	38.664	2621.	2327.	*	* 368.2	14.8	2184.7	288.3	8.228	* 13.1	2115.9	198.8	8.198	8.097	2.244	119.7	98.1

CARBONATE REPORT

2050ECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 485 1 19 12 77 1348 27 16.8 N 34 31.8 E 1171

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P=1ATM,T=INSITU*					CALC PARAMETERS P,T=INSITU									
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8.000)	TALK (EO/KG)	TIT TC02* (M/KG) (E-6)	GC TC02* (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG) (E-6)	DELTA CO3= (M/KG) (E-6)
181	7	23.377	48.482	2483.	2084.	*	328.5	9.4	1799.9	274.6	8.263	9.4	1799.9	274.6	5.459	8.263	3.252	231.3	211.8
182	27	23.381	48.482	2479.	2084.	*	332.9	9.6	1882.5	271.9	9.258	9.6	1882.6	271.8	5.533	8.257	3.219	228.4	288.8
183	77	22.539	48.365	2472.	2183.	*	355.5	18.5	1838.3	254.2	8.233	18.4	1838.5	254.8	5.885	9.238	3.886	218.2	198.6
184	98	22.894	48.378	2469.	2189.	*	361.9	18.8	1858.2	248.8	8.225	18.8	1858.5	247.8	6.888	8.222	2.933	283.8	184.2
185	148	21.983	48.411	2468.	2121.	*	379.2	11.3	1878.3	239.4	8.288	11.3	1878.7	239.8	6.264	8.283	2.831	194.3	175.8
186	198	21.748	48.451	2466.	2141.	*	415.8	12.5	1983.2	225.4	8.175	12.4	1983.7	224.9	6.791	8.168	2.666	188.4	168.5
187	248	21.554	48.499	2458.	2161.	*	467.9	14.1	1939.5	287.3	8.131	14.8	1948.3	286.7	7.539	8.123	2.454	162.8	142.8
188	297	21.641	48.518	2455.	2168.	*	488.3	14.7	1952.5	288.8	8.115	14.6	1953.3	288.1	7.846	8.185	2.376	155.8	135.8
189	348	21.649	48.548	2453.	2178.	*	497.5	15.8	1956.8	198.2	8.188	14.9	1957.7	197.4	8.889	8.896	2.346	152.1	132.8
110	399	21.662	48.549	2458.	2175.	*	516.1	15.5	1966.3	193.2	8.894	15.4	1967.3	192.3	8.388	8.881	2.286	146.7	126.5
111	447	21.676	48.571	2447.	2182.	*	541.1	16.3	1978.8	187.8	8.877	16.2	1979.9	186.8	8.679	8.862	2.212	148.1	119.9
112	497	21.686	48.588	2447.	2181.	*	538.2	16.2	1977.4	187.5	8.879	16.1	1978.6	186.3	8.671	8.862	2.216	148.2	119.8
114	547	21.698	48.583	2449.	2176.	*	521.6	15.7	1968.4	191.9	8.898	15.6	1969.8	190.6	8.474	8.872	2.258	144.2	123.8
115	597	21.695	48.587	2443.	2188.	*	545.2	16.4	1978.8	185.6	8.873	16.2	1979.5	184.2	9.849	8.853	2.192	137.5	117.8
116	648	21.698	48.588	2447.	2174.	*	521.1	15.6	1966.5	191.8	8.898	15.5	1968.2	190.3	8.539	8.869	2.265	143.3	122.7
117	697	21.698	48.589	2446.	2172.	*	517.8	15.5	1964.1	192.3	8.893	15.4	1965.9	198.7	8.528	8.869	2.269	143.4	122.7
118	746	21.692	48.589	2458.	2168.	*	484.9	14.6	1958.7	282.7	8.118	14.4	1952.6	281.8	8.872	8.893	2.391	153.3	132.5
119	795	21.691	48.598	2449.	2168.	*	581.9	15.1	1956.2	196.8	9.184	14.9	1958.2	194.9	8.364	8.878	2.319	146.9	126.0
120	845	21.578	48.587	2458.	2158.	*	462.9	13.9	1935.1	289.0	8.135	13.8	1937.3	287.8	7.927	8.186	2.462	158.7	137.7
121	894	21.657	48.585	2456.	2155.	*	458.9	13.8	1931.8	289.4	8.138	13.6	1934.2	287.2	7.885	8.188	2.465	158.6	137.6
122	942	21.652	48.583	2458.	2153.	*	451.8	13.6	1927.3	212.1	8.143	13.4	1929.8	289.8	7.731	8.112	2.496	160.3	139.8
123	993	21.639	48.583	2457.	2154.	*	454.8	13.7	1929.5	218.7	8.141	13.5	1932.2	288.3	7.885	8.188	2.478	159.8	137.8
124	1040	21.554	48.582	2468.	2145.	*	431.9	13.8	1913.6	218.4	8.158	12.8	1916.4	215.8	7.588	8.125	2.567	156.3	144.9

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 487 1 22 12 77 0584 19 55.5 N 38 29.9 E 1719

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TALK (EQ/KG)	MEASURED PARAMETERS				*CALC PARAMETERS P=1ATM, T=INSITU*						CALC PARAMETERS P, T=INSITU							
					TIT (E-6)	GC TC02 (E-6)	TC02 (E-6)	PC02 (E-6)	H2CO3 (E-6)	HC03- (E-6)	CO3* (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3* (E-6)	PH	PH	ICP (E-6)	DELTA CO3* (E-6)	DELTA CO3* (E-6)		
101	6	27.266	39.369	2446.	2034.	*	*	*	373.4	9.8	1771.5	272.7	8.227	*	9.8	1771.5	272.7	5.928	8.227	3.147	228.9	289.2
102	29	27.276	39.359	2443.	2051.	*	*	*	369.8	9.7	1767.3	274.8	8.231	*	9.7	1767.4	273.9	5.894	8.238	3.168	238.8	218.3
103	59	27.225	39.430	2444.	2852.	*	*	*	372.8	9.8	1769.7	272.5	8.227	*	9.8	1769.9	272.4	5.953	8.225	3.148	228.3	288.6
105	155	22.180	40.376	2461.	2143.	*	*	*	432.8	12.8	1989.3	220.9	8.162	*	12.8	1989.7	228.5	6.976	8.156	2.689	176.2	156.4
106	279	21.307	40.549	2446.	2207.	*	*	*	616.6	18.5	2817.5	171.8	8.029	*	18.4	2818.2	178.4	9.556	8.028	2.926	125.6	185.6
107	370	21.750	40.586	2442.	2200.	*	*	*	584.7	18.1	2809.2	172.6	8.035	*	18.8	2918.1	171.8	9.493	8.823	2.844	125.4	186.3
108	463	21.739	40.593	2446.	2197.	*	*	*	586.4	17.6	2882.3	177.1	8.847	*	17.5	2983.4	176.1	9.299	8.832	2.036	138.2	189.9
109	549	21.739	40.599	2441.	2186.	*	*	*	567.3	17.0	1988.4	188.6	8.858	*	16.9	1989.7	179.4	9.128	8.840	2.135	133.0	112.5
110	532	21.743	40.606	2442.	2182.	*	*	*	553.2	16.6	1981.9	183.5	8.858	*	16.5	1983.4	182.1	8.980	8.847	2.168	135.2	114.6
111	722	21.749	40.686	2440.	2175.	*	*	*	539.6	16.2	1972.2	186.6	8.877	*	16.8	1974.8	185.8	8.862	8.852	2.282	137.5	116.7
112	796	21.756	40.687	2442.	2174.	*	*	*	533.4	16.8	1969.4	188.6	8.881	*	15.8	1971.4	186.8	8.823	8.854	2.224	138.0	118.8
115	919	21.767	40.609	2443.	2170.	*	*	*	521.8	15.6	1962.7	191.7	8.098	*	15.4	1965.8	189.5	8.728	8.859	2.256	140.8	119.7
116	995	21.780	40.607	2444.	2167.	*	*	*	512.2	15.3	1957.4	194.2	8.896	*	15.1	1959.9	191.9	8.652	8.863	2.295	142.7	121.5
117	1059	21.794	40.613	2442.	2167.	*	*	*	516.6	15.5	1958.6	192.9	8.893	*	15.3	1961.3	198.4	8.778	8.857	2.267	140.8	119.4
118	1143	21.818	40.611	2443.	2167.	*	*	*	514.3	15.4	1958.1	193.5	8.895	*	15.2	1961.8	198.8	8.781	8.856	2.272	140.7	119.2
119	1242	21.838	40.618	2448.	2157.	*	*	*	482.1	14.4	1939.5	203.1	8.119	*	14.2	1942.7	208.1	8.369	8.877	2.382	149.3	127.6
120	1340	21.846	40.610	2443.	2164.	*	*	*	508.1	15.2	1953.4	195.4	8.899	*	14.9	1955.8	192.3	8.825	8.854	2.289	140.8	119.0
121	1439	21.852	40.607	2445.	2164.	*	*	*	584.7	15.1	1952.1	196.8	8.182	*	14.9	1955.8	193.4	8.834	8.854	2.382	141.3	119.2
122	1490	21.871	40.607	2444.	2163.	*	*	*	584.3	15.1	1951.2	196.7	8.182	*	14.8	1955.8	193.2	8.866	8.852	2.388	140.8	119.6
123	1588	21.884	40.610	2444.	2158.	*	*	*	497.3	14.9	1946.6	198.6	8.187	*	14.5	1958.6	194.8	8.822	8.854	2.319	141.7	119.4
124	1665	21.933	40.618	2446.	2159.	*	*	*	491.7	14.7	1943.8	208.6	8.112	*	14.4	1948.1	196.6	8.792	8.856	2.340	142.9	120.4

CARBONATE REPORT

GEOSSECS INDIAN STATION 488 LAST DATE 1 24 12 77 TIME 0627 LATITUDE 14 42.7 N LONGITUDE 42 10.3 E BOT DEPTH 598

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EO/KG)	MEASURED PARAMETERS			*CALC PARAMETERS P.=1ATM.T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (ARAG) (M/KG)
					TIT (M/KG)	* GC TC02 *(M/KG)	** TC02 *(E-6)	PCO2 (ATM) (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH		
114	58	26.631	37.484	2388	2033	*	* 393.6	18.6	1783.8	245.4	8.207	* 18.6	1783.2	245.2	6.232	8.205	2.693	288.3	180.1
115	79	23.354	37.047	2382	2138	*	* 578.1	16.6	1945.3	176.1	8.063	* 16.6	1945.5	175.9	8.718	8.068	1.952	139.9	118.7
116	83	23.225	38.569	2408	2154	*	* 588.3	16.9	1968.8	177.0	8.056	* 16.9	1968.2	176.9	8.858	8.053	2.880	132.1	112.8
117	182	23.227	40.815	2446	2117	*	* 422.0	12.2	1876.1	229.6	8.172	* 12.2	1876.4	229.4	6.788	8.169	2.679	184.3	164.5
118	182	21.919	40.469	2441	2178	*	* 527.8	15.7	1963.6	198.7	8.086	* 15.7	1964.0	198.3	8.312	8.088	2.257	145.9	126.1
119	241	21.928	40.528	2448	2191	*	* 584.3	17.5	1996.5	177.0	8.048	* 17.4	1997.1	176.5	9.124	8.040	2.897	131.8	111.9
120	325	21.763	40.575	2436	2199	*	* 619.0	19.5	2011.0	169.5	8.026	* 18.5	2011.7	169.9	9.651	8.015	2.808	123.7	103.7
121	374	21.758	40.594	2430	2198	*	* 606.2	18.2	2008.7	171.1	8.033	* 19.1	2001.5	178.3	9.552	8.028	2.826	124.9	104.8
122	434	21.754	40.535	2428	2188	*	* 605.1	18.1	1999.8	171.9	8.033	* 13.8	1999.9	178.1	9.598	8.018	2.824	124.3	104.1
123	494	21.755	40.598	2437	2192	*	* 594.4	17.8	1999.9	174.4	8.041	* 17.7	2001.0	173.3	9.459	8.024	2.862	127.2	106.9
124	587	21.759	40.682	2426	2187	*	* 607.6	18.2	1998.5	178.3	8.031	* 18.1	1999.9	169.1	9.745	8.011	2.812	122.4	101.9

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 489 1 25 12 77 0427 12 18.2 N 43 57.1 E 516

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG)	MEASURED PARAMETERS		CALC PARAMETERS P=1ATM, T=INSITU*					CALC PARAMETERS P, T=INSITU									
					TIT (E-5)	GC TC02* (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (E-6)	DELTA CO3= (E-6)		
113	16	27.874	36.436	2371.	2818.	*	*	363.6	9.7	1745.6	254.7	8.238	*	9.7	1745.6	254.6	5.791	8.237	2.728	289.6	189.4
114	49	23.349	35.728	2325.	2187.	*	*	591.7	17.5	1929.8	168.5	8.848	*	17.4	1929.1	168.4	8.992	8.846	1.688	114.9	94.5
115	69	22.291	35.944	2335.	2168.	*	*	768.2	23.3	2815.4	129.3	7.946	*	23.3	2815.5	129.2	11.378	7.944	1.362	83.6	63.1
116	108	18.662	35.679	2327.	2215.	*	*	929.3	31.2	2887.5	96.4	7.857	*	31.1	2887.7	96.2	14.818	7.853	1.286	58.1	29.5
117	148	16.298	35.638	2327.	2236.	*	*	977.8	35.1	2116.6	84.3	7.827	*	35.0	2116.9	84.1	15.874	7.922	0.878	37.6	16.8
118	288	15.885	35.643	2326.	2238.	*	*	946.8	35.3	2128.6	82.8	7.834	*	35.2	2121.8	81.9	14.918	7.826	0.854	34.8	13.9
119	258	14.842	35.858	2332.	2239.	*	*	914.9	34.3	2128.2	84.6	7.847	*	34.2	2128.6	84.2	14.538	7.838	0.885	37.8	15.9
120	333	14.339	35.934	2341.	2288.	*	*	915.3	34.8	2131.5	93.3	7.846	*	34.7	2132.2	93.1	14.675	7.833	0.375	35.3	14.1
121	371	16.286	36.353	2349.	2218.	*	*	752.5	37.4	2895.2	135.4	7.925	*	27.3	2835.9	134.8	12.257	7.912	1.123	57.1	35.9
122	416	17.913	37.275	2378.	2285.	*	*	579.3	33.8	2853.1	125.9	7.978	*	22.9	2854.8	125.1	18.878	7.954	1.378	79.5	57.4
123	455	17.359	37.158	2365.	2287.	*	*	594.2	24.8	2851.7	121.3	7.967	*	23.9	2862.6	120.5	11.185	7.951	1.312	72.7	51.5
124	581	18.838	37.587	2378.	2186.	*	*	619.5	28.4	2823.6	141.9	9.816	*	28.3	2824.7	141.8	18.838	7.999	1.558	93.8	71.9

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 413 1 27 12 77 2310 13 21.3 N 53 18.0 E 2013
 413 5 29 12 77 1219 13 21.1 N 53 17.9 E 2796

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02*=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (02/KG)	MEASURED PARAMETERS			*CALC PARAMETERS P=1ATM, T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA C03= (CALC) (M/KG)	DELTA C03= (ARRG) (M/KG)
					TIT TC02* (E-6)	* GC TC02 (E-6)	* PCO2 (ATM) (E-6)	H2CO3 (E-6)	HCO3- (E-6)	C03= (E-6)	PH	* H2CO3 (E-6)	HCO3- (E-6)	C03= (E-6)	PH	PH	ICP (E-6)		
101	8	26.079	35.033	2336.	2016.	*	* 374.6	10.3	1765.1	240.6	8.224	* 10.3	1765.1	240.6	5.970	0.224	2.542	195.5	175.2
102	44	25.907	35.034	2363.	2030.	*	* 300.1	10.7	1702.9	236.4	8.213	* 10.7	1703.1	236.3	6.147	0.211	2.496	191.0	170.6
103	107	23.415	35.714	2330.	2004.	*	* 495.1	14.6	1805.7	103.7	8.115	* 14.6	1686.0	103.4	7.730	9.111	1.320	137.6	117.0
104	167	19.243	35.529	2330.	2179.	*	* 735.2	24.3	2035.3	118.4	7.351	* 24.2	2035.6	118.2	11.334	7.946	1.231	71.7	50.9
105	200	16.662	35.505	2331.	2224.	*	* 905.0	31.5	2059.6	92.9	7.869	* 31.4	2100.0	92.6	13.753	7.862	0.964	45.0	24.9
106	250	15.051	35.504	2334.	2231.	*	* 853.6	31.0	2109.2	89.9	7.077	* 31.7	2109.7	89.6	13.549	7.960	0.932	42.3	21.3
107	300	13.906	35.516	2330.	2242.	*	* 859.2	23.2	2122.9	85.9	7.070	* 33.1	2123.5	85.5	13.835	7.959	0.990	37.8	16.6
108	309	13.393	35.667	2344.	2270.	*	* 994.7	39.0	2156.0	75.0	7.310	* 30.0	2156.7	74.5	16.013	7.796	0.770	26.2	4.9
109	407	13.232	35.666	2346.	2257.	*	* 953.1	37.6	2152.2	77.3	7.827	* 37.4	2152.9	76.7	15.425	7.912	0.902	28.4	7.0
110	460	12.903	35.607	2340.	2273.	*	* 970.2	30.6	2159.1	75.3	7.010	* 30.4	2159.9	74.6	15.010	7.801	0.791	25.0	4.3
111	529	12.356	35.665	2351.	2200.	*	* 970.5	39.6	2167.2	73.2	7.013	* 39.4	2160.1	72.5	16.091	7.793	0.750	23.2	1.5
112	506	11.974	35.660	2354.	2271.	*	* 002.6	36.2	2156.1	70.7	7.054	* 35.9	2157.1	77.9	14.734	7.032	0.015	20.2	6.4
114	699	11.450	35.609	2357.	2201.	*	* 913.1	39.1	2167.7	75.3	7.030	* 37.0	2160.9	74.3	15.425	7.012	0.770	23.0	1.7
115	759	11.164	35.699	2362.	2201.	*	* 072.3	36.7	2166.6	77.7	7.056	* 36.4	2160.0	76.6	14.077	7.027	0.902	25.6	3.3
116	030	10.633	35.630	2367.	2294.	*	* 907.4	30.9	2101.4	73.0	7.039	* 30.5	2102.9	72.7	15.500	7.007	0.759	21.0	-1.4
117	099	9.950	35.560	2373.	2305.	*	* 910.0	40.2	2193.5	71.3	7.032	* 39.0	2195.1	70.1	15.916	7.790	0.731	17.9	-4.0
121	997	9.004	35.447	2379.	2312.	*	* 092.0	40.4	2200.9	70.7	7.041	* 39.9	2202.7	69.4	15.742	7.903	0.721	16.3	-6.7
119	1090	7.930	35.327	2305.	2333.	*	* 959.9	45.1	2224.1	63.0	7.000	* 44.5	2226.0	62.5	17.171	7.765	0.647	0.4	-14.9
120	1195	7.007	35.217	2391.	2347.	*	* 904.6	47.0	2239.0	60.2	7.795	* 47.2	2241.1	50.0	17.072	7.740	0.607	3.0	-19.8
529	1396	5.634	35.072	2400.	2347.	*	* 023.0	41.9	2237.4	67.6	7.065	* 41.3	2239.9	65.0	15.406	7.010	0.676	0.9	-15.3
530	1646	4.3	34.944	2426.	2356.	*	* 734.5	39.3	2244.9	71.9	7.909	* 38.5	2247.9	69.6	14.331	7.044	0.713	10.2	-14.0
531	1990	3.261	34.061	2436.	2369.	*	* 724.1	40.3	2250.2	70.6	7.912	* 39.4	2261.7	67.9	14.500	7.036	0.694	6.0	-19.9
532	2140	2.626	34.010	2436.	2357.	*	* 045.5	36.0	2244.1	75.2	7.956	* 35.0	2240.2	73.0	13.403	7.070	0.745	0.5	-10.2
533	2409	2.177	34.776	2439.	2349.	*	* 905.9	33.9	2233.5	81.6	7.994	* 32.9	2239.3	77.0	12.706	7.096	0.704	10.0	-17.6
534	2622	2.050	34.767	2443.	2352.	*	* 579.3	33.7	2236.1	32.2	7.990	* 32.6	2241.2	79.2	12.761	7.094	0.707	0.7	-19.3
503	2701	1.030	34.755	2450.	2343.	*	* 050.1	32.7	2226.2	34.1	3.010	* 31.6	2231.6	79.0	12.533	7.902	0.013	3.6	-20.1
122	2771	1.030	34.752	2453.	2352.	*	* 515.0	35.1	2233.3	77.3	7.972	* 34.3	2244.3	72.9	13.797	7.051	3.742	1.4	-27.3
123	2782	1.026	34.793	2437.	2345.	*	* 560.9	33.4	2229.1	92.5	0.004	* 32.2	2234.5	79.2	12.506	7.093	0.797	6.7	-22.1
124	2791	1.794	34.752	2434.	2342.	*	* 567.0	33.3	2226.2	32.4	0.004	* 32.1	2231.7	70.1	12.797	7.093	0.790	6.4	-22.4

! FOLLOWING TEMPERATURE OR SALINITY INDICATES INTERPOLATED VALUE

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 416 1 31 12 77 2016 19 45.5 N 64 37.0 E 3200

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TIT		CALC PARAMETERS P=1ATM,T=INSITU					CALC PARAMETERS P,T=INSITU									
				TALK (EQ/KG)	TC02* (M/KG)	GC TC02* (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3* (M/KG)	PH	PH	ICP (M/KG)	DELTA CO3- (M/KG)	DELTA CO3* (M/KG)	
101	3	26.350	36.487	2300.	2034.	*	* 370.9	10.1	1773.4	250.5	0.231	*	10.1	1773.4	250.5	5.073	0.231	2.679	205.5	105.3
102	39	26.338	36.480	2380.	2035.	*	* 372.4	10.1	1773.1	249.0	0.230	*	10.1	1775.2	249.7	5.907	0.229	2.671	204.6	104.3
103	71	23.169	36.255	2362.	2169.	*	* 703.4	20.0	2002.4	145.0	7.007	*	20.0	2002.6	145.7	10.372	7.904	1.548	100.1	79.7
104	114	20.699	36.052	2351.	2214.	*	* 077.6	27.7	2074.6	111.6	7.091	*	27.7	2074.9	111.4	12.972	7.007	1.170	55.5	44.9
105	131	19.930	35.904	2347.	2238.	*	* 965.1	31.2	2090.7	100.2	7.050	*	31.1	2090.9	100.0	14.273	7.045	1.055	53.9	33.2
106	179	10.179	35.947	2350.	2244.	*	* 969.5	32.9	2117.6	93.5	7.041	*	32.0	2117.9	93.2	14.622	7.035	0.903	46.7	26.0
107	107	17.009	35.936	2347.	2253.	*	*1030.3	35.5	2130.4	07.0	7.012	*	35.5	2130.0	06.0	15.639	7.006	0.914	48.2	19.4
108	233	17.009	36.004	2358.	2268.	*	* 904.2	34.5	2136.6	00.0	7.031	*	34.4	2137.1	00.5	15.035	7.023	0.936	41.6	20.7
109	279	15.620	36.002	2356.	2273.	*	*1031.0	37.7	2154.7	00.6	7.006	*	37.6	2155.2	00.2	15.992	7.796	0.946	32.9	11.9
110	320	14.710	35.000	2353.	2273.	*	*1013.0	30.1	2156.3	70.6	7.009	*	37.9	2156.9	70.2	15.932	7.790	0.023	30.6	9.4
111	433	13.279	35.777	2354.	2205.	*	*1034.7	40.7	2171.6	72.7	7.795	*	40.5	2172.3	72.2	16.637	7.779	0.757	23.6	2.2
112	504	11.732	35.633	2357.	2291.	*	* 993.9	41.1	2179.2	70.0	7.005	*	40.0	2100.2	70.0	16.471	7.703	0.731	20.3	-1.6
114	796	10.210	35.520	2362.	2309.	*	*1033.3	44.9	2199.7	64.4	7.704	*	44.5	2201.0	63.5	17.645	7.753	0.661	12.0	-10.4
115	996	8.790	35.394	2376.	2324.	*	* 900.0	45.1	2215.1	63.0	7.790	*	44.6	2216.0	62.6	17.396	7.760	0.649	9.4	-13.5
116	1197	7.420	35.247	2382.	2337.	*	* 909.7	47.3	2229.1	60.6	7.793	*	46.7	2231.2	59.1	17.946	7.746	0.611	4.2	-19.4
117	1396	6.106	35.125	2397.	2346.	*	* 984.3	45.2	2237.7	63.1	7.027	*	44.5	2240.2	61.4	16.901	7.772	0.632	4.5	-19.6
110	1646	4.760	34.990	2409.	2355.	*	* 030.7	44.1	2246.5	64.4	7.054	*	43.3	2249.4	62.3	16.277	7.700	0.639	3.0	-22.0
119	1095	3.652	34.809	2422.	2353.	*	* 719.7	39.4	2242.3	71.3	7.914	*	38.6	2245.3	63.6	14.912	7.030	0.702	6.0	-19.0
120	2143	2.216	34.329	2429.	2353.	*	* 717.4	40.4	2252.7	69.9	7.913	*	39.4	2256.6	67.0	14.003	7.027	0.604	2.5	-24.1
121	2390	2.426	34.794	2439.	2359.	*	* 637.2	36.6	2245.7	76.0	7.961	*	35.5	2250.3	73.2	13.637	7.055	0.747	5.1	-21.3
122	2633	2.009	34.767	2454.	2364.	*	* 599.1	34.2	2247.0	92.0	7.994	*	33.1	2253.0	70.0	12.924	7.909	0.794	0.1	-20.1
123	2893	1.873	34.754	2454.	2374.	*	* 620.1	36.0	2260.2	77.0	7.967	*	35.5	2265.7	72.9	14.007	7.051	0.741	0.1	-29.0
124	7123	1.719	34.743	2470.	2583.	*	* 599.1	35.3	2266.3	00.9	7.900	*	33.9	2273.0	76.1	13.752	7.052	0.775	0.2	-29.0

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 417 1 2 1 78 1928 12 59.3 N 54 29.9 E 4117
 417 3 3 1 78 8353 12 59.8 N 54 26.3 E 4117

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (MG/KG)	TIT (E-6)	GC TC02 (MG/KG)	CALC PARAMETERS P=(ATM.T=INSITU)					CALC PARAMETERS P.T=INSITU							
							PCO2 (MG/KG)	H2CO3 (MG/KG)	HC03- (MG/KG)	CO3* (MG/KG)	PH	H2CO3 (MG/KG)	HC03- (MG/KG)	CO3* (MG/KG)	PH	ICP (E-6)	DELTA CO3= (MG/KG)	DELTA CO3= (MG/KG)	
301	8	26.822	36.410	2377.	2820.	*	* 375.5	18.2	1767.5	248.3	8.226	* 18.2	1767.5	248.3	5.941	0.226	2.638	283.3	183.1
302	34	26.889	36.488	2377.	2927.	*	* 376.8	18.2	1769.2	247.6	8.225	* 18.2	1769.3	247.5	5.968	0.224	2.642	282.4	182.1
303	54	26.814	36.486	2381.	2821.	*	* 361.6	9.8	1756.9	234.3	8.240	* 9.8	1757.8	234.2	5.774	0.238	2.713	288.9	188.6
304	86	23.375	35.810	2337.	2112.	*	* 577.3	17.8	1929.8	165.2	8.859	* 17.8	1929.9	165.1	8.795	0.856	1.733	119.3	98.9
305	104	21.950	36.161	2355.	2195.	*	* 882.5	24.6	2845.8	125.4	7.938	* 24.5	2845.2	125.3	11.832	7.927	1.328	79.4	58.9
306	146	17.463	35.647	2334.	2228.	*	* 926.2	32.1	2183.1	92.8	7.855	* 32.1	2183.3	92.6	14.146	7.849	0.967	46.2	25.4
307	165	16.578	35.622	2329.	2248.	*	* 1861.7	37.8	2138.7	79.5	7.796	* 37.7	2131.8	79.2	16.232	7.798	0.828	32.7	11.9
308	206	14.939	35.681	2332.	2257.	*	* 1841.7	39.8	2142.1	75.9	7.796	* 38.9	2142.5	75.6	16.258	7.789	0.789	29.7	7.8
309	233	13.756	35.483	2336.	2259.	*	* 978.2	38.8	2144.7	76.4	7.818	* 37.9	2143.1	76.1	15.528	7.889	0.791	28.8	7.8
310	300	12.642	35.438	2338.	2259.	*	* 974.3	39.2	2147.8	72.9	7.813	* 39.8	2147.5	72.5	15.788	7.882	0.753	24.7	3.5
311	387	11.817	35.418	2338.	2266.	*	* 993.9	41.8	2155.7	69.3	7.882	* 48.8	2156.4	68.8	16.338	7.787	0.714	28.4	-1.8
312	466	11.549	35.452	2338.	2266.	*	* 929.7	38.7	2154.3	73.8	7.829	* 38.5	2153.1	72.4	15.447	7.811	0.722	23.5	1.9
313	568	11.843	35.448	2341.	2277.	*	* 969.5	41.8	2166.8	69.2	7.818	* 48.8	2167.8	68.4	16.274	7.789	0.711	18.7	-3.1
314	622	18.631	35.418	2345.	2292.	*	* 1839.7	44.6	2183.2	64.2	7.781	* 44.3	2184.2	63.5	17.585	7.757	0.659	13.4	-8.6
315	598	18.236	35.422	2356.	2287.	*	* 918.7	39.6	2175.9	71.5	7.834	* 39.2	2177.2	78.6	15.564	7.888	0.733	19.9	-2.3
316	757	9.648	35.388	2354.	2381.	*	* 1884.2	44.5	2192.4	64.1	7.752	* 44.1	2193.8	63.1	17.338	7.761	0.655	11.6	-18.9
317	895	8.994	35.332	2368.	2388.	*	* 987.7	44.7	2199.7	63.5	7.797	* 44.3	2201.3	62.4	17.287	7.762	0.646	18.1	-12.6
318	994	8.255	35.264	2368.	2388.	*	* 983.7	42.8	2199.1	66.9	7.831	* 41.5	2208.8	65.7	16.112	7.793	0.679	12.5	-18.5
319	1096	7.718	35.223	2378.	2321.	*	* 964.8	45.6	2213.4	62.8	7.883	* 45.1	2215.2	68.7	17.368	7.768	0.627	6.6	-16.7
320	1245	6.848	35.148	2388.	2322.	*	* 872.4	42.6	2213.5	66.8	7.842	* 42.8	2215.6	64.4	16.186	7.793	0.663	8.9	-14.8
321	1394	6.811	35.878	2385.	2334.	*	* 892.7	44.9	2226.3	62.9	7.838	* 44.2	2228.7	61.1	16.883	7.775	0.628	4.3	-19.9
322	1541	5.112	34.992	2398.	2338.	*	* 819.8	42.5	2229.6	65.9	7.963	* 41.8	2232.5	63.9	15.781	7.882	0.655	5.6	-19.8
323	1698	4.333	34.925	2485.	2343.	*	* 772.7	41.3	2234.8	67.7	7.885	* 48.5	2237.1	65.5	15.214	7.818	0.678	5.7	-19.5
181	1828	3.731	34.882	2415.	2354.	*	* 763.9	41.7	2244.9	67.4	7.889	* 48.9	2248.2	65.8	15.286	7.816	0.664	3.8	-21.8
324	1838	3.579	34.865	2411.	2343.	*	* 717.9	39.4	2233.1	78.4	7.913	* 38.6	2236.5	67.9	14.472	7.839	0.694	6.6	-19.8
182	1976	3.173	34.836	2422.	2347.	*	* 674.5	37.5	2235.4	74.8	7.938	* 36.7	2239.1	71.2	13.824	7.859	0.727	8.4	-17.6
183	2123	2.778	34.889	2422.	2347.	*	* 664.3	37.6	2235.4	74.8	7.943	* 36.6	2239.4	78.3	13.375	7.858	0.724	6.7	-19.9
184	2272	2.534	34.794	2426.	2345.	*	* 638.5	36.8	2232.8	76.9	7.963	* 35.8	2236.4	73.6	13.488	7.873	0.751	7.7	-19.3
186	2378	2.128	34.765	2434.	2358.	*	* 689.3	35.4	2236.1	78.5	7.977	* 34.2	2241.1	74.7	13.364	7.874	0.761	5.6	-22.5
187	2718	1.363	34.757	2437.	2343.	*	* 563.9	32.9	2226.5	83.6	8.088	* 31.8	2231.9	79.3	12.686	7.899	0.888	8.5	-28.8
188	2868	1.945	34.747	2437.	2351.	*	* 594.8	34.9	2236.5	79.6	7.986	* 33.6	2242.1	75.2	13.457	7.871	0.766	2.7	-25.4
189	3017	1.799	34.742	2438.	2358.	*	* 585.3	34.4	2235.8	88.6	7.992	* 33.1	2248.9	76.8	13.443	7.872	0.774	1.7	-27.3
110	3165	1.793	34.748	2437.	2349.	*	* 584.2	34.4	2234.8	88.6	7.993	* 33.8	2248.2	75.8	13.616	7.866	0.771	-0.3	-38.4
111	3314	1.728	34.743	2438.	2344.	*	* 559.5	33.8	2227.4	83.6	8.018	* 31.6	2234.8	79.5	13.254	7.878	0.799	8.6	-38.8
112	2464	1.718	34.755	2434.	2335.	*	* 538.4	31.7	2217.1	86.1	9.825	* 38.3	2224.8	90.6	12.885	7.887	0.921	8.9	-38.2
114	3513	1.782	34.736	2431.	2334.	*	* 544.8	32.1	2216.9	85.8	8.019	* 38.7	2224.8	79.3	13.333	7.975	0.888	-2.3	-33.9
115	3765	1.595	34.757	2427.	2327.	*	* 531.2	31.3	2228.3	85.4	8.829	* 39.9	2216.3	88.4	13.221	7.979	0.818	-3.2	-55.4
116	3919	1.593	34.755	2439.	2339.	*	* 535.3	31.5	2228.7	96.7	8.828	* 38.8	2228.5	88.5	13.446	7.871	0.819	-5.2	-58.8
124	4399	1.788	34.755	2451.	2358.	*	* 533.7	31.8	2248.5	87.8	8.829	* 38.1	2248.7	91.2	13.627	7.366	0.827	-6.9	-48.3

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 418 1 5 1 78 8389 5 11.2 N 54 23.3 E 4695
 418 3 5 1 78 1147 5 12.6 N 54 23.6 E 4438

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2*=TCO2-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATH.T=INSITU*						CALC PARAMETERS P.T=INSITU							
SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (M/KG)	TIT TCO2* (E-6)	GC TCO2* (M/KG)	PCO2 (M/KG)	HCOC3 (M/KG)	HCOC3- (M/KG)	CO3* (E-6)	PH	H2CO3 (M/KG)	HCOC3- (E-6)	CO3* (M/KG)	AH (E-9)	PH	ICP (E-6)	DELTA CO3* (M/KG)	DELTA CO3* (M/KG)
381	2	27.790	35.623	2338.	1977.	*	* 365.1	9.6	1717.8	249.6	8.236	* 9.6	1717.9	249.6	5.813	8.236	2.686	284.5	184.3
382	23	27.883	35.617	2332.	1977.	*	* 362.2	9.6	1716.5	258.9	8.239	* 9.6	1716.6	258.8	5.779	8.238	2.619	285.7	185.4
383	42	27.883	35.625	2338.	1979.	*	* 357.9	9.5	1715.7	253.9	8.244	* 9.5	1715.8	253.7	5.721	8.243	2.658	288.4	188.1
384	63	27.639	35.787	2343.	2014.	*	* 411.3	18.9	1769.2	233.9	8.195	* 18.9	1769.4	233.7	6.487	8.193	2.452	180.3	168.8
385	96	21.523	35.476	2324.	2185.	*	* 541.5	16.8	1927.8	168.4	8.875	* 16.8	1928.0	168.2	8.472	8.872	1.666	114.3	93.7
386	134	18.543	35.265	2313.	2159.	*	* 690.2	23.3	2016.1	119.6	7.972	* 23.2	2016.4	119.4	18.793	7.967	1.234	73.1	52.3
387	145	17.544	35.236	2314.	2182.	*	* 682.9	23.7	2025.1	116.2	7.972	* 23.6	2025.4	115.9	18.788	7.967	1.197	69.5	48.7
388	211	15.223	35.234	2318.	2182.	*	* 675.6	25.1	2049.3	107.6	7.968	* 25.8	2049.7	187.3	18.356	7.968	1.108	68.3	39.3
389	257	13.695	35.189	2319.	2191.	*	* 568.5	26.8	2062.5	182.4	7.966	* 25.9	2063.0	182.8	11.841	7.957	1.052	54.6	33.5
389	296	13.852	35.184	2325.	2199.	*	* 662.4	26.3	2071.5	181.2	7.968	* 26.2	2072.1	180.7	11.824	7.958	1.039	53.8	31.9
311	345	11.896	35.158	2322.	2212.	*	* 782.8	29.8	2091.2	91.9	7.948	* 28.8	2091.8	91.4	11.822	7.927	0.941	43.2	21.9
312	397	11.455	35.148	2323.	2222.	*	* 736.8	38.8	2184.2	87.8	7.928	* 38.7	2184.9	86.5	12.448	7.985	0.891	38.8	16.5
313	447	11.835	35.143	2328.	2237.	*	* 781.8	33.1	2122.8	81.9	7.896	* 32.9	2122.8	81.2	13.217	7.879	0.937	32.4	18.8
314	497	18.799	35.148	2329.	2235.	*	* 757.5	32.4	2119.3	83.3	7.907	* 32.2	2120.2	82.6	12.932	7.888	0.851	33.4	11.6
315	567	18.445	35.174	2332.	2257.	*	* 862.1	37.2	2145.8	73.9	7.854	* 37.8	2146.8	73.2	14.783	7.833	0.754	23.4	1.5
316	537	18.128	35.213	2339.	2274.	*	* 921.7	48.2	2164.5	69.2	7.827	* 48.8	2165.6	68.4	15.758	7.982	0.786	18.1	-4.8
317	637	9.699	35.289	2349.	2286.	*	* 926.8	41.8	2176.6	68.5	7.825	* 48.7	2177.8	67.6	15.928	7.798	0.697	16.8	-5.4
319	948	7.833	35.114	2366.	2315.	*	* 998.3	44.8	2297.3	62.9	7.889	* 44.4	2288.9	61.7	16.988	7.772	0.635	8.8	-14.1
321	1144	6.498	35.815	2381.	2322.	*	* 851.8	42.1	2213.6	66.3	7.851	* 41.5	2215.7	64.8	15.658	7.886	0.665	18.1	-13.4
322	1295	5.827	34.977	2385.	2321.	*	* 799.1	48.5	2212.1	68.5	7.874	* 39.9	2214.4	66.8	15.818	7.823	0.685	18.7	-13.2
323	1443	4.939	34.321	2394.	2328.	*	* 762.9	39.9	2218.7	69.4	7.891	* 39.2	2221.3	67.5	14.659	7.834	0.691	18.8	-14.4
324	1589	4.219	34.875	2399.	2325.	*	* 699.7	37.5	2214.3	73.2	7.924	* 36.8	2217.2	78.9	13.777	7.861	0.725	12.1	-12.8
181	1596	4.155	34.884	2408.	2332.	*	* 738.6	39.3	2222.4	78.3	7.986	* 38.6	2225.3	68.1	14.363	7.843	0.697	9.2	-15.7
182	1745	3.679	34.841	2483.	2332.	*	* 791.7	38.4	2221.8	71.7	7.921	* 37.6	2225.1	69.3	14.873	7.852	0.788	8.9	-16.5
183	1995	3.173	34.818	2487.	2329.	*	* 653.7	36.5	2217.5	75.1	7.948	* 35.6	2221.8	72.3	13.481	7.873	0.738	18.4	-15.5
184	2945	2.778	34.794	2418.	2338.	*	* 635.5	36.8	2217.9	76.1	7.959	* 35.1	2221.8	73.1	13.274	7.877	0.746	9.6	-16.7
185	2192	2.598	34.783	2414.	2334.	*	* 632.1	36.8	2221.8	76.2	7.961	* 35.1	2226.8	73.8	13.395	7.873	0.744	7.9	-18.9
186	2337	2.354	34.772	2428.	2338.	*	* 583.9	33.6	2215.2	81.2	7.993	* 32.6	2219.8	77.7	12.685	7.899	0.792	11.1	-16.2
187	2486	2.218	34.765	2428.	2334.	*	* 597.5	34.6	2228.3	79.2	7.983	* 33.5	2225.1	75.4	13.879	7.883	0.769	7.2	-20.5
188	2534	2.858	34.757	2438.	2346.	*	* 686.8	35.3	2232.3	78.4	7.978	* 34.1	2237.4	74.5	13.487	7.873	0.759	4.6	-23.6
189	2788	1.927	34.749	2425.	2334.	*	* 571.6	33.4	2218.8	81.8	8.888	* 32.2	2224.2	77.5	12.918	7.889	0.798	5.9	-22.9
118	2936	1.838	34.745	2428.	2322.	*	* 512.3	38.1	2282.4	89.5	8.844	* 28.9	2288.3	84.8	11.819	7.927	0.863	11.4	-17.9
111	3892	1.767	34.748	2433.	2323.	*	* 498.6	29.3	2281.9	91.8	8.855	* 28.1	2288.2	86.7	11.577	7.933	0.883	11.5	-18.3
112	3235	1.787	34.736	2426.	2333.	*	* 559.8	33.8	2217.2	92.8	8.888	* 31.6	2223.6	77.8	13.218	7.879	0.792	8.9	-29.5
114	3388	1.677	34.734	2438.	2325.	*	* 513.7	38.3	2285.6	89.1	8.843	* 29.8	2212.4	83.5	12.365	7.988	0.851	4.8	-26.1
115	3535	1.651	34.735	2428.	2331.	*	* 542.3	32.8	2214.1	84.9	8.821	* 38.5	2221.1	79.3	13.282	7.879	0.887	-1.3	-32.7
116	3691	1.658	34.731	2428.	2325.	*	* 512.4	38.3	2283.7	89.8	8.843	* 28.8	2211.1	83.8	12.688	7.897	0.846	8.6	-31.4
117	3831	1.658	34.731	2428.	2325.	*	* 519.7	38.7	2286.3	88.8	8.838	* 29.2	2214.8	81.8	13.837	7.985	0.833	-2.7	-35.1
118	3988	1.659	34.734	2428.	2325.	*	* 519.9	38.7	2286.3	88.8	8.838	* 29.1	2214.8	81.6	13.222	7.879	0.931	-4.9	-37.9
119	4176	1.673	34.731	2429.	2331.	*	* 542.7	32.8	2214.1	84.9	8.821	* 38.4	2222.3	78.3	14.815	7.853	0.797	-18.9	-44.6
120	4275	1.555	34.732	2433.	2326.	*	* 587.3	38.8	2285.8	88.3	8.848	* 29.3	2214.4	83.3	13.250	7.877	0.848	-7.3	-41.4
121	4375	1.622	34.732	2428.	2326.	*	* 524.1	38.9	2297.6	87.4	8.834	* 29.2	2216.4	88.4	13.812	7.868	0.819	-11.5	-46.1
122	4474	1.599	34.732	2429.	2324.	*	* 517.1	38.5	2295.8	88.5	8.848	* 29.9	2214.8	91.3	13.752	7.861	0.828	-12.1	-47.1
123	4574	1.789	34.751	2425.	2324.	*	* 324.1	38.9	2285.7	87.4	8.834	* 29.1	2214.8	88.1	14.377	7.851	0.816	-14.8	-58.1
124	4655	1.715	34.732	2427.	2324.	*	* 328.7	38.7	2285.3	88.0	8.837	* 28.9	2214.6	88.5	14.855	7.852	0.828	-15.3	-58.9

CARBONATE REPORT

GEOSID	INDIAN	STATION	CST	DATE	TIME	LATITUDE	LONGITUDE	SOT DEPTH
		419	1	9 1 79	0915	3 57.1 N	56 48.2 E	4645
		419	3	8 1 79	1040	3 56.2 N	55 49.4 E	4648

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (ED/KG)	MEASURED PARAMETERS		CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3= (M/KG)	DELTA CO3= (M/KG)			
					TIT (E-6)	GC TC02* (E-6)	PC02 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	PH			ICP (E-6)		
301	5	27.342	35.337	2318.	1950.	*	*	353.9	9.5	1793.4	247.2	8.243	*	9.5	1783.4	247.2	5.711	8.243	2.560	202.8	191.7
302	16	27.243	35.344	2309.	1962.	*	*	356.9	9.6	1787.4	245.1	9.240	*	9.6	1787.4	245.8	5.768	8.240	2.539	199.8	179.5
303	116	18.662	35.222	2397.	2188.	*	*	583.5	16.9	1931.9	191.2	9.891	*	16.9	1932.1	151.8	8.188	8.887	1.559	184.8	84.1
304	165	16.954	35.254	2312.	2141.	*	*	588.5	20.5	1992.8	128.6	8.832	*	20.4	1992.3	129.3	9.418	8.826	1.326	91.7	60.9
305	217	13.688	35.225	2312.	2198.	*	*	691.8	27.8	2064.1	98.9	7.952	*	26.9	2064.5	98.5	11.383	7.944	1.818	51.4	38.4
306	203	11.998	35.208	2317.	2282.	*	*	688.7	28.8	2079.5	94.5	7.352	*	27.9	2080.1	94.1	11.442	7.941	8.971	46.4	25.2
307	316	11.273	35.118	2315.	2137.	*	*	645.1	27.1	2074.1	95.8	7.378	*	27.8	2074.7	95.3	11.803	7.958	8.981	47.3	26.8
308	405	10.181	35.027	2314.	2212.	*	*	686.5	30.8	2095.2	86.8	7.941	*	29.9	2095.9	96.2	11.863	7.926	8.885	37.5	16.8
309	475	5.959	35.261	2328.	2224.	*	*	715.7	31.4	2189.8	83.7	7.925	*	31.3	2189.7	83.1	12.398	7.987	8.854	33.9	12.2
310	525	5.946	35.134	2323.	2240.	*	*	829.2	36.4	2137.1	74.5	7.867	*	36.2	2138.0	73.8	14.225	7.847	8.768	24.3	2.5
311	585	9.814	35.151	2330.	2291.	*	*	814.2	35.9	2139.6	75.5	7.874	*	35.7	2140.6	74.7	14.872	7.852	8.778	24.7	2.9
312	629	9.298	35.897	2329.	2258.	*	*	845.6	38.8	2148.5	71.5	7.857	*	37.7	2149.6	78.7	14.783	7.833	8.727	28.4	-1.7
313	654	9.286	35.140	2337.	2266.	*	*	845.5	38.1	2156.2	71.7	7.856	*	37.9	2157.4	78.8	14.768	7.831	8.729	28.3	-1.9
314	694	8.397	35.117	2341.	2273.	*	*	859.8	39.8	2163.7	78.3	7.851	*	38.7	2164.9	69.4	14.999	7.824	8.714	18.5	-3.7
315	754	8.418	35.878	2344.	2278.	*	*	855.2	39.5	2169.2	69.2	7.851	*	39.2	2170.5	68.2	15.875	7.822	8.702	16.3	-5.5
316	784	8.513	35.118	2346.	2280.	*	*	959.7	39.6	2171.1	69.3	7.849	*	39.3	2172.5	68.3	15.167	7.819	8.783	16.7	-5.8
317	845	8.551	35.159	2358.	2286.	*	*	877.3	40.4	2177.1	68.5	7.842	*	40.8	2179.6	67.4	15.515	7.809	8.595	15.4	-7.3
318	908	7.983	35.122	2358.	2294.	*	*	857.3	40.3	2185.2	68.4	7.850	*	39.9	2186.8	67.2	15.323	7.915	8.692	14.6	-8.2
319	954	7.397	35.854	2358.	2382.	*	*	893.9	42.8	2194.4	64.8	7.831	*	42.4	2196.1	63.6	16.886	7.794	8.633	18.5	-12.4
320	1048	6.851	35.837	2365.	2384.	*	*	844.4	41.2	2195.8	67.8	7.853	*	40.7	2197.6	65.6	15.423	7.812	8.674	11.8	-11.4
321	1187	6.798	35.842	2368.	2385.	*	*	938.6	48.6	2196.4	67.9	7.868	*	48.1	2198.4	66.5	15.268	7.816	8.683	12.2	-11.2
322	1192	6.398	35.812	2382.	2318.	*	*	816.7	48.5	2208.9	68.6	7.867	*	48.8	2211.8	67.8	15.113	7.821	8.688	11.9	-11.7
323	1339	5.988	34.956	2378.	2320.	*	*	824.8	42.2	2212.2	65.6	7.859	*	41.6	2214.6	63.9	15.628	7.886	8.655	7.4	-16.7
324	1487	4.637	34.985	2384.	2315.	*	*	734.2	38.8	2285.6	78.6	7.884	*	38.1	2288.3	68.6	14.388	7.945	8.782	18.7	-13.9
101	1587	4.646	34.985	2387.	2317.	*	*	729.2	38.9	2287.4	71.1	7.987	*	37.8	2218.1	69.8	14.213	7.947	8.786	11.8	-13.6
102	1655	4.118	34.963	2389.	2319.	*	*	714.3	38.5	2289.5	71.8	7.913	*	37.7	2212.5	68.7	14.283	7.848	8.782	9.2	-15.8
103	1802	3.524	34.838	2390.	2325.	*	*	685.5	37.7	2214.7	72.6	7.929	*	36.9	2218.8	78.1	13.891	7.837	8.715	9.1	-16.5
104	1958	2.992	34.983	2400.	2326.	*	*	666.4	37.4	2215.6	73.8	7.939	*	36.6	2219.2	78.2	13.782	7.861	8.716	7.7	-18.3
105	2188	2.611	34.784	2414.	2334.	*	*	632.2	35.8	2221.9	76.1	7.961	*	35.1	2225.9	73.8	13.288	7.977	8.745	8.9	-17.6
106	2248	2.368	34.772	2405.	2325.	*	*	686.5	34.9	2212.2	77.9	7.976	*	33.9	2216.5	74.6	13.818	7.886	8.761	9.8	-18.8
107	2396	2.288	34.767	2409.	2323.	*	*	593.9	34.4	2289.7	78.9	7.983	*	33.3	2214.3	75.3	12.955	7.888	8.768	8.1	-19.4
108	2543	2.184	34.761	2409.	2319.	*	*	574.4	33.4	2284.8	80.9	7.996	*	32.3	2289.7	77.8	12.741	7.995	8.785	8.2	-19.8
109	2692	2.084	34.754	2418.	2323.	*	*	585.2	34.1	2289.5	79.4	7.989	*	33.8	2214.7	75.4	13.157	7.881	8.768	4.9	-23.6
110	2835	1.892	34.758	2411.	2318.	*	*	558.1	32.7	2282.9	82.5	8.087	*	31.5	2288.4	78.1	12.769	7.894	8.795	5.9	-23.1
111	2951	1.812	34.745	2408.	2319.	*	*	571.9	33.6	2285.8	80.4	7.997	*	32.3	2218.8	75.8	13.279	7.877	8.772	1.9	-27.6
112	3137	1.731	34.748	2405.	2314.	*	*	546.5	32.2	2198.3	83.5	8.015	*	30.9	2284.5	78.6	12.983	7.889	8.888	2.9	-27.1
114	3298	1.678	34.736	2407.	2384.	*	*	513.9	30.3	2186.2	87.5	8.839	*	29.1	2192.7	82.2	12.364	7.988	8.837	4.8	-25.7
115	3433	1.693	34.734	2404.	2386.	*	*	538.2	31.4	2189.8	84.8	8.825	*	30.8	2196.6	79.4	12.936	7.988	8.849	8.8	-31.8
116	3559	1.587	34.734	2407.	2385.	*	*	515.6	30.5	2137.5	86.9	8.837	*	29.1	2194.6	81.2	12.736	7.895	8.827	8.3	-31.2
117	3731	1.525	34.729	2405.	2384.	*	*	517.6	30.7	2186.9	86.4	8.835	*	29.3	2194.3	80.4	13.888	7.886	8.819	-2.8	-34.9
119	3881	1.495	34.729	2403.	2388.	*	*	539.3	32.1	2192.7	83.3	8.818	*	30.5	2288.3	77.2	13.726	7.862	8.786	-8.8	-48.7
119	4028	1.468	34.725	2403.	2383.	*	*	528.8	30.9	2186.2	85.9	8.833	*	29.4	2194.2	79.5	13.451	7.871	8.889	-7.8	-41.8
120	4178	1.421	34.722	2402.	2399.	*	*	587.8	30.3	2181.3	87.4	8.842	*	29.7	2189.6	88.7	13.354	7.874	8.821	-8.6	-42.5
121	4325	1.398	34.724	2405.	2398.	*	*	493.7	29.5	2179.8	89.5	8.853	*	27.8	2187.7	82.4	13.169	7.998	8.839	-9.8	-43.4
122	4425	1.379	34.722	2398.	2398.	*	*	516.3	30.8	2181.5	85.7	8.834	*	29.1	2198.2	78.7	13.988	7.857	8.891	-14.2	-49.1
123	4522	1.365	34.728	2398.	2295.	*	*	584.7	30.2	2177.7	87.2	8.843	*	28.4	2186.6	79.9	13.739	7.962	8.814	-14.4	-49.6
124	4621	1.347	34.728	2398.	2291.	*	*	498.4	29.3	2172.4	89.3	8.855	*	27.6	2181.7	81.8	13.499	7.878	8.932	-14.1	-49.7

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 421 1 13 1 78 1128 5 3.2 S 58 54.7 E 4875
 421 3 13 1 78 2188 5 18.7 S 58 54.3 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/100)	TALK (EQ/KG)	MEASURED PARAMETERS		CALC PARAMETERS P=1ATM.T=INSITU*								AM	PH	ICP	DELTA CO3* (CALC) (M/KG)	DELTA CO3* (ARAG) (M/KG)
					TC02* (M/KG)	TC02 (M/KG)	PC02 (ATM) (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3* (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3* (M/KG)					
381	2	28.598	34.658	2272.	1926.	*	* 357.5	9.3	1672.2	244.5	8.241	* 9.3	1672.2	244.5	5.745	3.241	2.484	199.4	179.1
383	43	26.676	35.817	2388.	1962.	*	* 357.1	9.7	1713.1	239.1	9.239	* 9.7	1713.3	239.8	5.792	8.237	2.454	193.6	173.2
384	94	16.865	35.164	2315.	2145.	*	* 562.8	28.4	1996.9	127.7	8.841	* 28.4	1997.1	127.5	9.164	8.838	1.315	81.3	68.6
386	146	13.782	35.157	2318.	2158.	*	* 516.5	28.1	2884.6	125.3	8.868	* 28.1	2884.9	125.8	8.693	8.861	1.289	78.4	57.5
388	211	12.149	35.869	2316.	2161.	*	* 522.7	21.4	2822.7	116.9	8.856	* 21.3	2823.2	116.5	8.948	8.848	1.198	63.3	48.3
318	387	11.873	34.991	2314.	2178.	*	* 534.7	22.7	2837.3	118.1	8.843	* 22.6	2837.9	189.5	9.294	8.832	1.124	61.6	48.3
311	496	9.895	34.899	2318.	2187.	*	* 555.8	24.5	2868.8	182.5	8.824	* 24.4	2868.9	181.8	9.786	8.889	1.841	53.1	31.6
314	592	7.595	34.793	2334.	2252.	*	* 723.6	34.5	2141.2	76.3	7.914	* 34.2	2142.5	75.3	12.968	7.887	8.768	24.4	2.8
316	797	7.149	34.842	2349.	2273.	*	* 751.2	36.3	2163.8	73.6	7.899	* 36.8	2164.5	72.5	13.548	7.963	8.741	28.7	-1.9
317	896	6.591	34.838	2368.	2287.	*	* 758.6	37.3	2177.4	72.3	7.896	* 36.9	2179.8	71.1	13.771	7.861	8.726	18.4	-4.4
318	956	6.445	34.867	2362.	2291.	*	* 765.8	37.9	2181.7	71.4	7.891	* 37.5	2183.4	78.1	14.883	7.854	8.716	16.9	-6.1
319	1865	5.943	34.859	2367.	2299.	*	* 769.1	38.8	2198.3	69.9	7.888	* 38.3	2192.2	68.5	14.261	7.846	8.788	14.4	-8.9
320	1264	4.985	34.828	2375.	2311.	*	* 767.2	48.1	2282.8	68.1	7.886	* 39.5	2285.1	66.4	14.593	7.836	8.678	18.5	-13.4
322	1498	3.951	34.783	2384.	2387.	*	* 678.5	36.3	2196.4	74.2	7.938	* 35.7	2199.2	72.1	13.226	7.879	8.735	14.1	-18.5
181	1787	3.864	34.763	2393.	2318.	*	* 621.4	34.8	2198.1	77.1	7.966	* 34.8	2281.5	74.5	12.735	7.895	8.759	13.6	-12.8
324	1834	2.943	34.764	2393.	2313.	*	* 632.9	35.6	2281.7	75.7	7.958	* 34.8	2285.2	73.8	13.329	7.885	8.744	11.6	-14.1
182	1936	2.714	34.758	2398.	2314.	*	* 618.7	34.7	2281.6	77.7	7.972	* 33.8	2285.3	74.9	12.728	7.895	8.763	12.4	-13.6
183	2885	2.456	34.756	2481.	2318.	*	* 618.3	35.8	2285.7	77.3	7.972	* 34.1	2289.7	74.2	12.918	7.889	8.756	18.2	-16.3
184	2235	2.315	34.754	2482.	2311.	*	* 572.6	33.8	2196.7	81.3	7.997	* 32.1	2281.1	77.9	12.352	7.988	8.793	12.3	-14.6
185	2383	2.133	34.758	2484.	2316.	*	* 582.8	33.8	2282.4	79.8	7.998	* 32.8	2287.8	76.2	12.731	7.895	8.776	9.1	-18.4
186	2534	1.997	34.747	2488.	2318.	*	* 546.8	31.9	2194.2	83.9	8.815	* 38.8	2199.2	79.9	12.187	7.914	8.814	11.1	-16.8
187	2682	1.981	34.745	2412.	2317.	*	* 558.7	32.2	2281.3	83.5	8.813	* 31.1	2286.5	79.3	12.422	7.986	8.988	8.9	-19.5
188	2831	1.848	34.742	2489.	2312.	*	* 548.7	31.7	2195.8	84.5	8.819	* 38.6	2281.4	88.8	12.482	7.987	8.815	7.9	-21.8
189	2981	1.779	34.739	2418.	2317.	*	* 555.3	32.7	2281.9	82.4	8.889	* 31.4	2287.8	77.8	12.898	7.889	8.793	4.8	-25.5
118	3131	1.745	34.738	2489.	2312.	*	* 538.7	31.7	2195.8	84.5	8.821	* 38.4	2282.8	79.5	12.721	7.895	8.818	3.9	-26.8
111	3279	1.787	34.735	2411.	2385.	*	* 584.7	29.8	2186.1	89.1	8.847	* 28.5	2192.7	83.8	12.126	7.916	8.853	6.4	-24.1
112	3429	1.677	34.734	2489.	2319.	*	* 565.2	33.4	2284.7	88.9	8.881	* 31.9	2211.4	75.7	13.691	7.864	8.771	-3.6	-34.6
114	3589	1.635	34.731	2488.	2316.	*	* 555.6	32.9	2281.3	81.9	8.888	* 31.4	2288.3	76.3	13.688	7.864	8.777	-5.8	-36.6
115	3738	1.582	34.738	2489.	2383.	*	* 581.9	29.7	2184.2	89.1	8.848	* 28.3	2191.7	83.8	12.619	7.899	8.845	-8.3	-32.4
116	3888	1.588	34.727	2488.	2388.	*	* 521.7	31.8	2191.1	85.9	8.832	* 29.5	2198.8	79.7	13.283	7.877	8.812	-5.6	-38.3
117	4868	1.368	34.722	2396.	2382.	*	* 538.4	32.2	2187.2	82.6	8.817	* 38.5	2195.2	76.3	13.999	7.854	8.777	-11.4	-44.8
118	4236	1.317	34.721	2396.	2295.	*	* 518.6	38.6	2178.3	86.1	8.838	* 28.9	2186.7	73.4	13.545	7.868	8.888	-18.9	-45.8
119	4489	1.293	34.719	2392.	2295.	*	* 524.1	31.4	2179.6	84.8	8.827	* 29.7	2188.2	77.1	14.135	7.858	8.785	-15.6	-58.4
120	4534	1.279	34.719	2393.	2289.	*	* 498.4	29.9	2171.5	97.6	8.847	* 28.1	2188.5	58.3	13.635	7.865	8.818	-14.3	-49.5
121	4623	1.275	34.717	2391.	2288.	*	* 581.2	38.8	2178.9	87.1	8.844	* 28.3	2188.1	79.6	13.832	7.959	8.818	-16.3	-51.9
122	4787	1.272	34.716	2387.	2285.	*	* 583.1	38.2	2188.4	86.4	8.842	* 28.4	2177.8	78.9	14.817	7.853	8.883	-18.3	-54.3
123	4755	1.256	34.716	2387.	2295.	*	* 548.4	32.4	2181.3	81.3	9.814	* 38.5	2198.5	74.8	15.867	7.822	8.753	-24.8	-68.2
124	4832	1.264	34.716	2386.	2284.	*	* 582.5	38.1	2187.5	86.3	8.843	* 28.3	2177.1	78.6	14.173	7.849	8.888	-28.5	-57.8

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 422 1 15 1 78 0806 9 49.3 S 52 14.4 E 4165

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2*=TCO2-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	MEASURED PARAMETERS				*CALC PARAMETERS P=IATH.T=INSITU*							CALC PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)	
				TALK (E-6)	TIT (E-6)	* GC TCO2* (M/KG)	* TCO2 (M/KG)	* PCO2 (M/KG)	H2CO3 (E-6)	HC03- (E-6)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HC03- (E-6)	CO3= (E-6)	AH (E-9)	PH	ICP (E-6)			
101	339	18.881	34.949	2320.	2175.	*	*	* 527.0	22.5	2041.8	110.7	9.049	*	* 22.4	2042.4	110.1	9.196	9.036	1.128	62.0	48.6
102	542	8.737	34.786	2322.	2193.	*	*	* 536.8	24.6	2067.4	101.0	9.835	*	* 24.4	2068.5	100.1	9.671	8.815	1.021	50.3	28.4
103	723	7.454	34.763	2335.	2238.	*	*	* 645.2	30.9	2123.3	83.9	7.959	*	* 30.6	2124.6	82.8	11.700	7.332	0.044	31.6	9.2
104	842	6.657	34.792	2351.	2271.	*	*	* 715.4	35.2	2160.3	75.5	7.917	*	* 34.9	2161.8	74.4	13.043	7.005	0.758	22.1	-0.6
105	981	6.175	34.798	2354.	2281.	*	*	* 741.8	37.1	2171.7	72.2	7.901	*	* 36.7	2173.5	70.0	13.715	7.063	0.722	17.4	-5.7
106	1240	4.710	34.756	2392.	2300.	*	*	* 557.4	34.7	2195.4	79.0	7.950	*	* 34.1	2197.7	76.1	12.545	7.902	0.776	20.4	-3.5
107	1480	3.880	34.761	2302.	2302.	*	*	* 549.9	35.4	2191.0	75.5	7.949	*	* 34.8	2193.8	73.4	12.870	7.890	0.748	15.3	-9.3
100	1687	2.999	34.744	2391.	2299.	*	*	* 579.4	32.5	2104.9	01.6	7.994	*	* 31.8	2108.1	79.0	11.838	7.927	0.005	19.0	-6.3
109	2006	2.373	34.752	2402.	2311.	*	*	* 573.4	33.0	2196.0	01.2	7.997	*	* 32.1	2200.9	78.0	12.191	7.914	0.795	14.0	-12.5
110	2483	2.046	34.747	2406.	2321.	*	*	* 594.1	34.6	2208.8	78.4	7.982	*	* 33.5	2212.8	74.7	13.104	7.083	0.761	5.5	-21.3
111	2877	1.348	34.742	2425.	2329.	*	*	* 549.6	32.2	2212.4	04.3	8.016	*	* 31.0	2218.1	79.9	12.565	7.901	0.813	7.2	-21.9
112	3271	1.685	34.736	2411.	2317.	*	*	* 549.9	32.5	2281.6	03.0	8.012	*	* 31.1	2280.0	77.9	13.137	7.982	0.793	0.6	-29.9
114	3503	1.528	34.729	2408.	2309.	*	*	* 535.5	31.2	2192.5	05.3	8.029	*	* 29.8	2199.6	79.7	12.998	7.086	0.811	-1.6	-33.2
115	3833	1.375	34.723	2399.	2299.	*	*	* 516.5	30.8	2182.5	05.7	8.034	*	* 29.3	2190.0	79.6	13.162	7.081	0.810	-5.0	-37.6
116	4030	1.147	34.717	2386.	2292.	*	*	* 493.9	29.8	2164.8	07.5	8.049	*	* 28.2	2172.8	81.0	12.960	7.087	0.824	-6.5	-39.8
117	4061	1.097	34.714	2385.	2280.	*	*	* 489.9	29.5	2162.8	07.9	8.053	*	* 28.0	2170.7	81.4	12.087	7.090	0.828	-6.6	-48.0
118	4081	1.075	34.714	2384.	2201.	*	*	* 495.3	29.9	2164.2	06.9	8.047	*	* 28.4	2172.3	80.3	13.079	7.083	0.817	-7.9	-41.4
119	4090	1.063	34.714	2383.	2277.	*	*	* 484.1	29.3	2159.4	08.4	8.056	*	* 27.7	2167.5	81.7	12.021	7.092	0.932	-6.6	-48.2
120	4106	1.049	34.713	2382.	2298.	*	*	* 527.9	31.9	2173.8	02.3	8.021	*	* 30.3	2181.8	75.9	12.936	7.056	0.772	-12.7	-46.3
121	4114	1.049	34.714	2382.	2277.	*	*	* 487.2	29.5	2159.7	07.9	8.053	*	* 27.9	2167.9	81.2	12.933	7.088	0.826	-7.5	-41.2
122	4124	1.050	34.714	2406.	2294.	*	*	* 470.3	28.4	2173.5	02.1	8.071	*	* 26.9	2181.9	95.2	12.400	7.907	0.367	-3.6	-37.3
123	4134	1.051	34.713	2381.	2277.	*	*	* 490.7	29.7	2160.0	07.4	8.050	*	* 28.1	2168.2	80.7	13.050	7.084	0.821	-0.3	-42.0
124	4141	1.052	34.712	2381.	2286.	*	*	* 523.3	31.6	2171.7	02.7	8.025	*	* 30.0	2179.7	76.2	13.872	7.058	0.776	-12.8	-46.6

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 424 1 16 1 79 1830 12 18.4 S 53 41.4 E 4676
 424 3 16 1 78 1841 12 18.1 S 53 39.6 E 4382

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATH, T=INSITU						CALC PARAMETERS P.T=INSITU								
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EO/KG)	TIT (E-6)	GC TC02 (M/KG)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
301	1	29.153	35.833	2291.	1932.	*	*	354.5	9.1	1669.6	253.3	8.246	9.1	1669.6	253.3	5.678	8.246	2.681	288.2	188.8
302	10	29.134	35.832	2289.	1929.	*	*	352.2	9.8	1666.8	253.9	8.248	9.8	1666.8	253.9	5.651	8.248	2.680	288.8	188.5
304	121	20.086	35.888	2293.	2044.	*	*	438.9	13.7	1852.8	178.4	9.154	13.6	1852.2	178.1	7.084	8.158	1.828	132.8	111.3
308	398	10.215	34.387	2304.	2141.	*	*	452.2	19.7	2088.9	128.4	8.183	19.6	2081.7	119.7	8.146	9.889	1.224	71.1	49.6
309	487	9.832	34.766	2309.	2164.	*	*	484.1	22.8	2032.2	189.8	8.874	21.8	2033.2	189.8	8.793	8.856	1.118	59.6	37.8
311	687	7.894	34.688	2322.	2219.	*	*	581.9	29.2	2183.3	86.5	7.983	28.3	2184.6	85.5	11.837	7.957	8.369	34.5	12.2
313	799	6.328	34.725	2348.	2257.	*	*	648.8	32.3	2144.8	88.8	7.955	32.8	2145.4	79.6	11.981	7.924	8.818	27.7	5.8
314	988	5.928	34.751	2351.	2271.	*	*	694.3	35.1	2168.6	75.3	7.926	34.7	2162.3	74.1	12.844	7.891	8.754	21.3	-1.6
315	999	5.448	34.752	2355.	2278.	*	*	698.8	35.9	2168.3	73.8	7.923	35.4	2178.2	72.4	13.878	7.884	8.738	18.8	-4.4
316	1898	5.187	34.746	2358.	2287.	*	*	722.6	37.6	2178.4	71.8	7.988	37.1	2198.4	69.5	13.655	7.965	8.788	15.8	-8.5
317	1199	4.717	34.735	2368.	2284.	*	*	684.9	36.1	2174.6	73.2	7.928	35.6	2176.8	71.6	13.158	7.881	8.729	16.2	-7.6
319	1419	3.888	34.712	2367.	2289.	*	*	654.1	35.7	2179.1	74.3	7.944	35.1	2181.7	72.2	12.942	7.888	8.735	14.8	-9.6
321	1647	3.167	34.722	2377.	2289.	*	*	595.8	33.3	2176.4	79.3	7.981	32.6	2179.6	76.9	12.158	7.915	8.782	17.2	-7.9
322	1793	2.861	34.731	2388.	2289.	*	*	576.7	32.6	2175.6	88.8	7.993	31.8	2179.1	78.1	11.972	7.922	8.795	17.8	-8.5
324	2889	2.319	34.738	2391.	2384.	*	*	589.9	33.8	2191.2	79.8	7.986	32.9	2195.2	75.9	12.986	7.983	8.773	11.8	-14.7
181	2282	2.128	34.748	2395.	2388.	*	*	549.7	31.9	2185.8	83.1	8.812	31.8	2189.5	79.6	12.881	7.921	8.818	13.5	-13.6
182	2384	2.878	34.743	2481.	2313.	*	*	588.1	33.7	2199.5	79.8	7.991	32.7	2284.1	76.2	12.718	7.996	8.776	9.8	-18.4
184	2677	1.917	34.741	2481.	2385.	*	*	543.6	31.8	2189.4	83.8	8.816	38.7	2194.7	79.6	12.317	7.989	8.811	9.2	-19.2
185	2827	1.847	34.748	2482.	2387.	*	*	546.8	32.8	2191.7	83.2	8.814	38.9	2197.3	78.8	12.546	7.981	8.883	6.8	-22.1
187	3129	1.785	34.736	2482.	2381.	*	*	528.5	38.7	2184.8	86.3	9.833	29.4	2198.2	81.4	12.357	7.988	8.828	5.7	-24.2
189	3426	1.597	34.738	2484.	2382.	*	*	514.9	38.5	2184.7	86.9	8.837	29.1	2191.5	81.4	12.578	7.988	8.828	2.1	-28.9
118	3577	1.554	34.728	2398.	2382.	*	*	535.8	31.7	2188.6	83.7	8.821	38.3	2193.6	78.1	13.261	7.877	8.795	-3.1	-34.7
111	3728	1.529	34.727	2394.	2318.	*	*	582.8	34.6	2197.9	77.5	7.986	33.8	2285.8	72.8	14.591	7.836	8.733	-11.2	-43.3
112	3874	1.427	34.723	2395.	2287.	*	*	488.1	29.1	2168.1	89.8	8.856	27.6	2175.9	83.5	12.545	7.982	8.858	-1.7	-34.4
114	4832	1.353	34.719	2389.	2291.	*	*	528.3	31.1	2175.5	84.4	8.838	29.5	2183.4	78.1	13.568	7.968	8.795	-9.3	-42.6
115	4184	1.248	34.716	2393.	2298.	*	*	498.1	29.9	2163.3	96.8	8.845	29.3	2171.6	88.1	13.252	7.879	8.815	-9.4	-43.3
116	4333	1.224	34.715	2382.	2273.	*	*	475.2	28.6	2154.5	89.9	8.853	27.0	2163.2	92.8	12.891	7.898	8.842	-8.9	-43.4
117	4483	1.181	34.713	2366.	2279.	*	*	484.1	29.1	2168.8	89.1	8.857	27.5	2169.8	81.8	13.262	7.877	8.832	-12.2	-47.3
118	4523	1.178	34.714	2381.	2282.	*	*	518.7	30.7	2166.5	94.7	8.835	29.8	2175.4	77.6	14.026	7.853	8.798	-16.9	-52.2
119	4537	1.168	34.713	2379.	2291.	*	*	514.3	38.9	2165.8	84.2	8.832	29.2	2174.7	77.1	14.177	7.948	8.784	-17.9	-53.3
124	4654	1.177	34.714	2382.	2277.	*	*	489.5	29.5	2159.7	87.9	8.852	27.7	2169.8	80.3	13.637	7.865	8.818	-16.1	-51.9

CARBONATE REPORT

STATION CAST DATE TIME LATITUDE LONGITUDE SGT DEPTH
 425 1 18 1 78 1244 17 19.0 3 55 51.8 E
 425 2 18 1 78 1612 17 16.3 S 55 51.9 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P.1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU										
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/100)	TALK (EO/KG)	TIT (M/KG)	GC TC02= (M/KG)	TC02= (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	CP (M/KG)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
225	13	29.19	35.111	2389.	1955.	*	*	356.8	9.3	1695.4	258.3	8.245	9.3	1695.4	258.3	5.696	8.244	2.576	285.1	184.8
226	95	24.88	35.110	2313.	1952.	*	*	382.3	8.6	1689.5	253.9	8.293	9.6	1689.7	253.7	5.134	8.298	2.611	287.9	187.4
227	146	23.51	35.198	2316.	1971.	*	*	318.8	9.1	1719.1	242.7	8.281	9.1	1719.5	242.4	5.296	8.276	2.588	196.2	175.6
229	235	20.56	35.381	2326.	2939.	*	*	363.7	11.6	1822.6	283.8	8.218	11.5	1823.2	283.3	6.164	8.218	2.188	156.5	135.6
229	322	16.51	35.415	2335.	2883.	*	*	369.7	13.2	1891.3	178.5	8.282	13.1	1892.8	177.8	6.441	8.191	1.846	130.2	189.8
230	463	8.73	34.696	2385.	2139.	*	*	412.9	18.9	1996.9	122.2	8.134	18.9	1997.9	121.3	7.642	8.117	1.234	72.1	58.4
231	596	6.774	34.597	2324.	2289.	*	*	544.3	26.7	2089.5	92.8	8.823	26.5	2098.7	91.8	18.882	8.888	0.931	41.5	19.4
181	771	5.915	34.624	2339.	2251.	*	*	544.8	32.7	2139.4	79.9	7.954	32.4	2148.9	77.8	11.899	7.924	0.798	26.0	3.4
182	946	4.953	34.664	2361.	2282.	*	*	675.7	35.4	2171.8	74.8	7.935	34.9	2173.5	73.5	12.647	7.898	0.747	28.2	-2.9
183	1086	4.288	34.650	2368.	2273.	*	*	616.9	33.2	2161.3	78.5	7.969	32.7	2163.4	76.9	11.864	7.926	0.781	22.4	-1.1
184	1236	3.792	34.677	2375.	2298.	*	*	622.6	34.8	2178.1	77.9	7.966	33.5	2188.5	76.1	12.114	7.917	0.773	28.2	-3.7
185	1387	3.361	34.672	2369.	2288.	*	*	592.8	32.8	2167.6	79.6	7.983	32.3	2178.2	77.6	11.788	7.929	0.788	28.5	-3.8
186	1588	2.942	34.698	2388.	2295.	*	*	561.7	31.6	2178.5	82.9	8.884	31.8	2173.4	80.6	11.368	7.944	0.819	22.2	-2.6
187	1684	2.541	34.789	2385.	2288.	*	*	516.5	29.5	2162.4	88.1	8.837	28.9	2165.7	85.4	18.715	7.978	0.869	25.3	8.8
188	1859	2.374	34.719	2389.	2286.	*	*	522.1	38.8	2168.8	87.1	9.832	29.3	2172.5	84.2	11.888	7.959	0.857	22.4	-3.4
189	2832	2.288	34.728	2393.	2294.	*	*	535.1	31.8	2177.9	85.1	9.822	38.1	2181.9	81.9	11.437	7.942	0.834	18.4	-7.9
118	2257	2.842	34.734	2398.	2382.	*	*	545.8	31.7	2186.6	83.7	8.815	38.8	2191.8	80.2	11.874	7.925	0.816	14.3	-12.7
111	2379	1.992	34.736	2488.	2381.	*	*	532.6	31.1	2184.7	85.2	8.825	38.1	2189.4	81.5	11.758	7.938	0.838	14.3	-13.1
112	2557	1.927	34.737	2486.	2382.	*	*	514.4	38.1	2184.0	87.9	8.839	29.1	2189.1	83.8	11.545	7.938	0.854	14.8	-13.3
114	2748	1.942	34.736	2489.	2389.	*	*	528.8	31.8	2192.8	86.8	8.828	29.9	2197.5	81.6	12.844	7.919	0.831	18.5	-18.1
115	2914	1.796	34.736	2418.	2387.	*	*	516.8	38.4	2189.1	87.5	8.837	29.2	2194.9	82.9	11.983	7.921	0.844	9.8	-19.4
116	3085	1.725	34.736	2489.	2389.	*	*	526.5	31.8	2192.8	86.8	8.838	29.8	2198.1	81.1	12.481	7.987	0.825	6.8	-23.8
117	3261	1.666	34.732	2411.	2382.	*	*	493.7	29.2	2182.1	98.7	8.855	27.9	2188.7	85.4	11.868	7.926	0.869	8.2	-22.3
118	3337	1.635	34.738	3411.	2312.	*	*	529.4	31.3	2195.2	85.5	8.827	38.8	2201.8	88.3	12.753	7.894	0.817	2.1	-28.6
119	3687	1.521	34.728	2484.	2299.	*	*	582.6	29.8	2188.7	98.4	8.846	28.4	2188.8	82.6	12.516	7.983	0.841	1.8	-38.7
120	3774	1.405	34.724	2538.	2296.	*	*	518.3	38.4	2178.9	86.8	8.839	29.9	2186.3	88.7	12.939	7.999	0.822	-3.1	-35.4
121	3947	1.329	34.721	2392.	2293.	*	*	517.3	38.9	2177.8	85.8	8.832	29.4	2184.8	78.8	13.368	7.974	0.882	-7.4	-48.4
122	4114	1.218	34.728	2391.	2293.	*	*	492.2	29.8	2154.4	89.6	8.868	27.4	2172.7	82.9	12.733	7.895	0.843	-5.7	-39.4
123	4294	1.155	34.714	2385.	2281.	*	*	493.6	29.7	2163.8	87.4	8.849	28.1	2172.4	88.5	13.266	7.877	0.819	-18.5	-44.8
124	4455	1.188	34.711	2391.	2277.	*	*	468.7	27.8	2156.4	92.8	8.877	26.2	2165.4	85.4	12.612	7.899	0.869	-8.2	-43.2

CARBONATE REPORT

SECS	INDIAN	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
		427	1	30 1 70	2312	27 4.2 S	55 59.1 E	5101
		427	3	30 1 70	1248	27 5.0 S	56 59.0 E	5051

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TALK (EO/KG)	MEASURED PARAMETERS		*CALC PARAMETERS P=1ATH, T=INSITU*					CALC PARAMETERS P.T=INSITU					DELTA CO3= (CALC)	DELTA CO3= (ARAG)		
					TC02* (M/KG)	TC02 (E-6)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (E-6)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (E-6)	PH	PH			ICP (M/KG)	ICP (E-6)
301	5	25.593	35.239	2308.	1955.	*	* 329.6	9.2	1793.9	245.9	8.264	*	9.2	1793.9	245.9	5.453	8.263	2.540	200.7	100.3
302	40	25.327	35.242	2300.	1959.	*	* 326.2	9.2	1784.0	245.8	8.266	*	9.2	1784.1	245.7	5.432	8.263	2.539	200.3	179.9
304	110	20.429	35.431	2320.	2022.	*	* 343.5	11.0	1891.0	218.0	8.237	*	11.0	1891.3	209.7	5.847	8.233	2.178	163.7	143.0
305	120	19.129	35.481	2326.	2043.	*	* 351.9	11.7	1931.7	199.6	8.225	*	11.6	1932.0	199.3	5.810	8.221	2.073	153.1	132.4
306	142	18.731	35.513	2331.	2043.	*	* 339.1	11.4	1829.0	202.7	8.239	*	11.3	1829.3	202.3	5.848	8.234	2.186	156.8	135.3
307	106	16.861	35.516	2320.	2070.	*	* 363.3	12.8	1874.9	182.3	8.200	*	12.8	1875.3	181.9	6.299	8.201	1.894	135.2	114.3
308	373	13.411	35.277	2320.	2002.	*	* 343.3	13.5	1900.9	167.6	8.218	*	13.4	1901.8	166.8	6.234	8.205	1.725	118.6	97.3
310	455	12.554	35.169	2312.	2101.	*	* 308.2	15.3	1935.4	150.3	8.177	*	15.2	1936.4	149.3	6.907	8.161	1.540	100.5	78.9
313	724	10.163	34.855	2302.	2100.	*	* 372.7	15.3	1953.0	138.7	8.176	*	16.1	1954.7	137.2	7.079	8.150	1.402	86.3	64.0
315	850	7.851	34.592	2295.	2149.	*	* 451.3	21.3	2018.1	109.6	8.095	*	21.1	2019.9	100.0	8.691	8.061	1.095	55.5	32.7
317	1094	5.129	34.430	2307.	2290.	*	* 532.6	27.7	2084.5	87.9	8.022	*	27.3	2086.6	86.1	10.474	7.980	0.869	31.6	9.2
318	1167	4.632	34.478	2321.	2223.	*	* 563.3	29.9	2109.8	83.4	8.000	*	29.4	2112.0	81.6	11.099	7.955	0.825	26.5	2.8
320	1346	3.573	34.511	2330.	2251.	*	* 626.9	34.5	2142.6	73.8	7.955	*	34.0	2145.1	71.9	12.554	7.901	0.720	15.1	-9.2
321	1431	3.226	34.553	2339.	2252.	*	* 586.0	32.7	2141.4	77.9	7.962	*	32.1	2144.1	75.8	11.880	7.925	0.760	18.2	-6.3
322	1516	3.073	34.606	2350.	2256.	*	* 557.0	31.2	2143.2	81.6	8.003	*	30.6	2146.1	79.3	11.481	7.943	0.805	20.9	-3.9
323	1594	2.915	34.629	2353.	2260.	*	* 559.0	31.5	2147.3	81.2	9.001	*	30.9	2150.4	79.7	11.528	7.930	0.799	19.6	-5.4
324	1664	2.770	34.645	2353.	2270.	*	* 599.0	34.0	2159.8	76.2	7.973	*	33.3	2162.9	73.8	12.412	7.906	0.750	13.9	-11.3
101	1740	2.707	34.657	2350.	2263.	*	* 540.9	31.2	2149.5	82.3	8.009	*	30.5	2152.9	79.6	11.493	7.940	0.809	19.1	-6.4
102	1900	2.510	34.697	2364.	2266.	*	* 535.3	30.6	2151.4	83.9	8.019	*	29.9	2155.2	81.0	11.594	7.943	0.824	18.8	-7.1
103	2037	2.376	34.720	2371.	2275.	*	* 542.6	31.2	2160.8	83.0	8.014	*	30.4	2164.0	79.8	11.693	7.932	0.813	16.1	-10.3
104	2216	2.293	34.736	2370.	2272.	*	* 505.7	29.2	2154.5	88.3	8.043	*	28.3	2159.9	84.0	11.094	7.955	0.863	19.4	-7.5
105	2306	2.152	34.730	2303.	2207.	*	* 535.6	31.1	2171.5	84.4	8.020	*	30.1	2176.2	80.7	11.072	7.925	0.822	13.6	-13.9
106	2535	2.062	34.742	2390.	2293.	*	* 539.9	31.4	2177.7	84.0	8.018	*	30.3	2182.6	80.0	12.092	7.919	0.815	11.3	-16.7
107	2096	1.963	34.741	2392.	2301.	*	* 561.4	32.8	2187.2	81.0	8.002	*	31.7	2192.5	76.9	12.756	7.894	0.793	6.3	-22.2
100	2055	1.866	34.730	2395.	2304.	*	* 560.4	32.8	2190.1	81.1	8.003	*	31.7	2195.6	76.7	12.923	7.899	0.791	4.3	-24.7
103	5013	1.772	34.735	2390.	2293.	*	* 505.5	29.7	2175.0	88.3	8.044	*	28.6	2181.0	83.4	11.907	7.924	0.849	9.2	-20.4
110	3170	1.675	34.731	2397.	2297.	*	* 521.0	29.8	2180.5	85.7	8.031	*	29.5	2186.0	80.7	12.463	7.904	0.821	4.5	-25.6
111	3330	1.571	34.720	2396.	2294.	*	* 512.3	30.4	2175.9	86.7	8.030	*	29.1	2193.6	81.4	12.453	7.905	0.829	3.3	-27.4
112	3491	1.460	34.726	2393.	2295.	*	* 524.4	31.2	2179.2	84.6	8.027	*	29.8	2196.1	79.1	12.952	7.899	0.805	-1.1	-32.3
114	3650	1.375	34.722	2392.	2290.	*	* 507.1	30.3	2173.1	86.6	8.040	*	28.9	2190.4	80.7	12.767	7.894	0.822	-1.6	-33.5
115	3017	1.295	34.720	2387.	2209.	*	* 510.4	31.1	2173.6	84.3	8.030	*	29.6	2181.1	78.3	13.267	7.877	0.797	-6.1	-38.7
116	3976	1.205	34.710	2385.	2276.	*	* 477.0	28.7	2157.3	90.0	8.063	*	27.2	2165.4	83.5	12.477	7.904	0.849	-3.2	-36.3
117	4135	1.135	34.715	2377.	2272.	*	* 487.3	29.4	2154.9	87.7	8.053	*	27.0	2163.1	81.1	12.975	7.897	0.825	-7.0	-41.6
110	4252	1.081	34.713	2376.	2276.	*	* 503.7	30.4	2160.4	85.2	8.039	*	28.0	2169.0	78.4	13.599	7.866	0.797	-12.0	-47.2
119	4452	0.990	34.712	2374.	2256.	*	* 473.5	29.7	2148.1	89.2	8.063	*	27.0	2157.0	81.9	13.046	7.895	0.834	-11.6	-46.7
120	4604	0.965	34.709	2372.	2271.	*	* 495.3	30.1	2155.3	85.6	8.043	*	28.4	2164.4	79.2	13.052	7.850	0.796	-17.6	-53.3
121	4760	0.954	34.707	2370.	2270.	*	* 499.7	30.3	2154.7	85.0	8.041	*	28.5	2164.0	77.5	14.155	7.849	0.788	-20.0	-57.1
122	4917	0.946	34.709	2379.	2254.	*	* 451.6	27.4	2143.5	93.1	8.002	*	25.7	2153.5	84.0	13.015	7.806	0.863	-15.9	-52.9
123	5025	0.957	34.707	2371.	2270.	*	* 496.5	30.1	2154.3	85.6	8.043	*	28.2	2164.2	77.6	14.419	7.841	0.789	-24.9	-62.4
124	5037	0.950	34.707	2372.	2250.	*	* 485.9	29.5	2151.4	87.1	8.052	*	27.6	2161.4	79.0	14.136	7.850	0.804	-23.7	-51.2

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 429 1 6 2 78 1142 47 48.1 S 57 51.7 E 4586
 429 3 6 2 78 2022 47 39.7 S 57 53.6 E 4435

GC CO2 VALUES ARE NOT USED FOR COMPUTATION

TCO2**TCO2-15 (UM/KG)

MEASURED PARAMETERS										*CALC PARAMETERS P=1ATM,T=INSITU*					CALC PARAMETERS P,T=INSITU						
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG)	TIT (M/KG)	* GC TCO2* (M/KG)	* PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	ICP	DELTA CO3= (M/KG)	DELTA CO3= (ARAG) (M/KG)			
						(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)			
301	4	6.496	33.726	2271.	2893.	*	*	334.1	16.6	1948.7	127.7	8.203	*	16.6	1948.7	127.7	6.239	8.203	1.263	81.6	68.9
302	38	6.453	33.743	2275.	2894.	*	*	327.1	16.3	1947.4	138.3	8.214	*	16.3	1947.5	138.2	6.129	8.213	1.288	84.8	63.2
303	70	6.302	33.759	2273.	2885.	*	*	312.9	15.7	1935.6	133.7	8.238	*	15.7	1935.8	133.6	5.938	8.227	1.322	87.8	66.2
304	145	4.250	33.800	2274.	2120.	*	*	357.8	19.3	1987.7	113.8	8.171	*	19.3	1988.0	112.8	6.829	8.166	1.118	65.6	44.5
305	195	3.132	33.896	2276.	2137.	*	*	308.3	21.4	2811.3	184.3	8.143	*	21.3	2811.7	184.8	7.313	8.136	1.833	56.4	35.1
306	244	3.103	34.036	2292.	2149.	*	*	398.3	22.4	2823.7	188.9	8.126	*	22.3	2826.2	188.5	7.649	8.116	1.883	52.5	31.1
307	295	3.808	34.123	2284.	2164.	*	*	436.6	24.6	2845.5	93.9	8.098	*	24.5	2846.1	93.4	8.355	8.978	8.934	45.8	23.5
308	306	2.566	34.184	2297.	2174.	*	*	424.6	24.3	2854.8	95.7	8.181	*	24.2	2854.7	95.1	8.209	8.986	8.953	46.8	24.2
310	522	2.573	34.314	2318.	2238.	*	*	589.5	33.7	2122.5	73.8	7.972	*	33.5	2123.5	73.8	11.183	7.951	8.735	32.9	8.8
311	681	2.528	34.374	2312.	2232.	*	*	589.7	33.8	2124.4	73.8	7.972	*	33.5	2125.5	72.9	11.278	7.948	8.735	22.2	-8.1
312	688	2.464	34.432	2322.	2232.	*	*	549.8	31.6	2121.4	79.8	8.881	*	31.3	2122.7	78.8	18.608	7.974	8.787	26.6	4.1
314	833	2.498	34.529	2331.	2241.	*	*	554.8	31.7	2138.1	79.1	8.888	*	31.4	2131.7	77.9	18.798	7.967	8.788	25.2	2.3
316	987	2.453	34.593	2336.	2249.	*	*	568.3	32.6	2138.7	77.7	7.998	*	32.2	2148.5	76.3	11.281	7.951	8.773	22.3	-1.8
317	1082	2.415	34.633	2336.	2251.	*	*	577.8	33.1	2141.1	76.8	7.984	*	32.7	2143.1	75.2	11.468	7.941	8.763	28.4	-3.2
319	1277	2.383	34.695	2348.	2248.	*	*	517.2	29.7	2126.8	84.3	8.828	*	29.2	2128.4	82.3	18.548	7.977	8.837	25.9	1.8
320	1373	2.331	34.728	2347.	2242.	*	*	588.1	28.8	2126.1	87.8	8.842	*	28.3	2128.9	84.9	18.288	7.988	8.864	27.6	3.2
322	1568	2.261	34.747	2342.	2246.	*	*	532.8	38.7	2132.9	82.4	8.816	*	38.1	2135.9	88.8	11.124	7.954	8.814	28.9	-4.1
323	1662	2.211	34.757	2342.	2241.	*	*	511.8	29.6	2126.5	84.9	8.831	*	29.8	2129.8	82.3	18.832	7.965	8.838	22.3	-2.9
324	1758	2.145	34.764	2347.	2248.	*	*	498.4	28.4	2123.5	88.1	9.849	*	27.8	2127.8	85.3	18.492	7.979	8.869	24.4	-1.2
181	1886	2.845	34.768	2344.	2238.	*	*	491.1	28.6	2121.9	87.5	8.847	*	27.9	2125.7	84.4	18.652	7.973	8.861	22.3	-3.6
182	2055	1.917	34.778	2358.	2237.	*	*	467.8	27.3	2118.3	91.3	8.868	*	26.6	2122.5	87.9	18.319	7.986	8.896	24.1	-2.3
183	2225	1.778	34.767	2356.	2232.	*	*	431.4	25.4	2189.3	97.3	8.188	*	24.6	2113.9	93.5	9.733	8.812	8.953	27.9	8.9
184	2393	1.629	34.758	2355.	2242.	*	*	463.5	27.4	2123.1	91.5	8.878	*	26.5	2128.8	87.5	18.581	7.975	8.892	28.1	-7.4
185	2564	1.471	34.749	2357.	2244.	*	*	468.7	27.4	2125.2	91.4	8.873	*	26.5	2138.4	87.2	18.696	7.971	8.888	17.9	-18.2
186	2731	1.319	34.748	2363.	2268.	*	*	493.8	29.6	2144.1	96.4	9.846	*	28.5	2149.5	82.8	11.576	7.936	8.835	18.8	-17.9
187	2982	1.164	34.738	2368.	2248.	*	*	459.9	27.7	2129.3	91.1	9.873	*	26.6	2135.1	86.2	11.841	7.957	8.978	13.1	-16.2
188	3872	0.988	34.728	2368.	2254.	*	*	476.2	28.9	2137.3	97.8	8.858	*	27.7	2143.4	82.9	11.689	7.935	8.843	7.6	-22.3
189	3236	0.848	34.711	2362.	2268.	*	*	487.9	29.7	2144.4	85.8	8.848	*	28.5	2158.9	88.6	12.868	7.918	8.828	3.4	-27.1
110	3485	0.668	34.792	2358.	2261.	*	*	581.8	38.8	2147.1	83.2	8.836	*	29.4	2153.7	77.8	12.628	7.899	8.792	-1.6	-32.9
111	3573	0.563	34.696	2362.	2259.	*	*	479.3	29.5	2143.1	86.3	8.854	*	28.2	2158.3	88.6	12.285	7.911	8.828	-1.1	-32.8
112	3738	0.469	34.689	2358.	2256.	*	*	488.2	29.7	2148.5	85.8	8.853	*	28.3	2148.8	79.8	12.532	7.982	8.811	-4.1	-36.5
114	3982	0.393	34.585	2359.	2246.	*	*	442.7	27.5	2127.1	91.5	8.885	*	26.8	2135.8	85.8	11.799	7.928	8.864	-1.2	-34.2
115	4078	0.321	34.682	2365.	2262.	*	*	475.7	29.6	2146.8	96.4	8.857	*	28.8	2154.1	79.8	12.888	7.893	8.812	-8.7	-42.4
116	4235	0.229	34.677	2361.	2257.	*	*	469.7	29.3	2148.8	86.9	8.861	*	27.7	2149.3	88.8	12.882	7.898	8.813	-18.9	-45.3
117	4402	0.167	34.574	2368.	2253.	*	*	458.5	29.7	2135.9	88.4	8.878	*	27.1	2144.7	81.2	12.887	7.893	8.825	-12.2	-47.3
118	4441	0.152	34.573	2368.	2268.	*	*	481.9	38.2	2145.8	84.8	8.858	*	28.5	2153.8	77.7	13.472	7.871	8.798	-16.3	-51.5
119	4472	0.141	34.573	2359.	2261.	*	*	488.2	38.6	2146.7	83.7	8.845	*	28.9	2155.5	76.6	13.687	7.864	8.779	-17.8	-53.2
170	4497	0.132	34.673	2358.	2252.	*	*	494.6	31.8	2148.4	82.6	8.848	*	29.3	2157.2	75.6	13.895	7.857	8.768	-19.3	-54.8
121	4516	0.105	34.671	2368.	2252.	*	*	488.8	38.6	2147.6	93.7	8.845	*	29.9	2156.5	76.6	13.736	7.862	8.779	-13.6	-54.1
122	4534	0.093	34.678	2361.	2255.	*	*	468.7	28.9	2138.2	87.9	8.858	*	27.2	2147.3	88.5	13.833	7.885	8.318	-14.9	-58.6
123	4552	0.087	34.578	2387.	2246.	*	*	443.2	27.8	2127.0	98.4	8.893	*	26.2	2137.0	82.9	12.659	7.899	8.842	-12.9	-48.6
124	4559	0.075	34.578	2366.	2255.	*	*	445.8	29.8	2136.4	98.6	8.892	*	26.3	2145.6	83.8	12.648	7.899	8.844	-12.8	-48.5

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE SBT DEPTH
 439 1 18 2 79 2884 59 59.1 S 59 58.6 E 4737
 430 3 18 2 78 8913 59 59.1 S 61 0.8 E 4732

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2=TCO2-15 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P=1ATM,T=INSITU*					CALC PARAMETERS P,T=INSITU									
SAMP NO	DEPTH (M)	TEMP (C)	SAL (0/00)	TALK (EQ/KG)	TIT TCO2* (M/KG)	GC TCO2 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARRAG) (M/KG)
301	8	1.000	33.941	2290.	2149.	*	359.5	21.2	2022.2	105.6	0.163	21.2	2022.2	105.6	6.374	0.163	1.048	59.3	38.5
302	18	1.769	33.342	2393.	2144.	*	341.0	20.2	2013.6	110.2	0.184	20.2	2013.7	110.2	6.557	0.183	1.893	63.0	43.0
304	80	-0.900	33.966	2381.	2163.	*	333.9	22.0	2036.9	104.1	0.181	22.0	2037.1	103.9	6.642	0.178	1.835	57.0	33.9
305	99	-0.844	34.823	2304.	2179.	*	366.5	24.0	2056.6	97.5	0.147	23.9	2056.0	97.3	7.109	0.143	0.370	50.2	29.1
306	119	-1.141	34.825	2303.	2179.	*	367.5	24.3	2058.3	96.4	0.145	24.3	2058.6	96.2	7.243	0.140	0.959	48.9	27.7
307	177	1.432	34.418	2330.	2245.	*	551.3	32.9	2139.5	76.6	0.998	32.0	2135.0	76.3	10.222	0.990	0.770	20.0	7.5
308	241	1.850	34.538	2335.	2250.	*	590.5	35.1	2150.0	72.0	0.967	35.0	2159.5	72.5	11.030	0.957	0.754	24.5	3.8
309	300	1.927	34.592	2338.	2255.	*	574.9	33.7	2145.6	75.8	0.984	33.5	2146.1	75.3	10.604	0.971	0.754	24.5	3.8
310	390	1.921	34.631	2345.	2261.	*	572.9	33.5	2151.1	76.4	0.986	33.4	2151.9	75.8	10.711	0.970	0.769	26.6	5.2
312	599	1.925	34.694	2349.	2261.	*	550.9	32.7	2149.8	78.5	0.996	32.4	2150.9	77.6	10.653	0.973	0.789	26.0	4.5
313	694	1.099	34.714	2340.	2255.	*	537.1	31.5	2142.7	80.9	0.812	31.2	2144.0	79.8	10.367	0.984	0.812	28.3	5.7
315	893	1.790	34.730	2352.	2256.	*	525.3	30.9	2142.6	82.5	0.821	30.5	2144.3	81.1	10.340	0.985	0.826	27.9	4.8
316	992	1.736	34.746	2354.	2250.	*	495.4	29.2	2134.1	86.7	0.845	28.8	2136.1	85.1	9.803	0.805	0.967	31.1	7.7
318	1192	1.562	34.743	2355.	2250.	*	480.0	29.0	2133.8	87.2	0.849	28.5	2136.2	85.3	9.956	0.802	0.869	29.5	5.5
319	1291	1.466	34.745	2350.	2249.	*	474.7	28.2	2131.3	89.4	0.861	27.8	2133.9	87.3	9.780	0.810	0.889	30.6	6.4
320	1388	1.369	34.740	2361.	2253.	*	476.8	28.5	2135.6	80.9	0.859	27.9	2138.4	86.7	9.904	0.804	0.883	29.1	4.6
322	1588	1.108	34.734	2359.	2250.	*	469.6	28.2	2132.4	89.4	0.864	27.6	2135.6	86.0	9.975	0.801	0.984	27.3	2.2
323	1690	1.105	34.727	2359.	2251.	*	471.4	28.4	2133.7	90.9	0.863	27.8	2137.1	86.1	10.112	0.995	0.877	25.7	0.2
324	1813	1.004	34.721	2363.	2250.	*	481.1	29.1	2141.4	87.4	0.855	28.4	2145.1	84.5	10.415	0.982	0.560	22.8	-3.0
101	1930	0.893	34.710	2357.	2262.	*	512.7	31.2	2148.7	82.1	0.828	30.4	2152.5	79.1	11.217	0.950	0.805	16.2	-10.1
102	2109	0.773	34.709	2359.	2259.	*	493.3	30.2	2144.1	84.8	0.843	29.3	2149.3	81.4	11.001	0.959	0.820	16.8	-10.0
103	2285	0.666	34.702	2360.	2270.	*	528.5	32.4	2157.9	79.7	0.815	31.5	2162.3	76.2	11.935	0.923	0.775	9.7	-17.7
104	2459	0.569	34.699	2362.	2261.	*	486.3	30.0	2145.0	85.3	0.849	29.0	2150.7	81.3	11.225	0.950	0.827	12.9	-15.0
105	2634	0.472	34.693	2359.	2265.	*	509.5	31.5	2151.8	81.7	0.829	30.4	2156.9	77.6	11.943	0.923	0.789	7.2	-21.3
106	2804	0.390	34.687	2361.	2263.	*	493.1	30.6	2148.7	93.7	0.842	29.5	2154.3	79.3	11.770	0.929	0.806	6.9	-22.1
107	2979	0.296	34.683	2369.	2260.	*	456.5	28.4	2142.0	99.6	0.874	27.3	2148.0	84.7	11.109	0.954	0.861	10.3	-19.4
108	3151	0.222	34.680	2350.	2260.	*	496.5	31.0	2148.4	82.6	0.830	29.8	2154.6	77.7	12.277	0.911	0.790	1.2	-29.1
109	3330	0.148	34.675	2358.	2265.	*	506.5	31.7	2152.1	81.2	0.830	30.4	2158.6	76.0	12.730	0.895	0.773	-2.7	-33.7
110	3505	0.079	34.675	2366.	2256.	*	449.2	29.2	2137.6	90.1	0.879	26.9	2144.0	84.3	11.537	0.930	0.857	3.3	-28.3
111	3600	0.016	34.670	2357.	2265.	*	507.6	32.0	2152.4	80.7	0.829	30.5	2159.5	75.0	13.210	0.879	0.762	-8.4	-48.6
112	3855	-0.034	34.667	2357.	2262.	*	495.3	31.2	2148.6	82.1	0.838	29.7	2156.2	76.1	13.130	0.882	0.773	-9.6	-42.6
114	4020	-0.089	34.665	2350.	2255.	*	466.6	29.5	2139.2	86.3	0.862	28.0	2147.3	79.8	12.622	0.899	0.810	-0.4	-42.1
115	4202	-0.133	34.663	2350.	2259.	*	479.5	30.4	2144.4	84.2	0.851	28.7	2152.7	77.5	13.170	0.880	0.788	-13.2	-47.5
116	4376	-0.170	34.665	2357.	2252.	*	457.8	29.0	2135.0	87.2	0.869	27.4	2144.5	80.1	12.820	0.892	0.814	-13.2	-40.2
117	4552	-0.204	34.661	2356.	2256.	*	474.0	30.1	2141.3	84.6	0.855	28.4	2150.3	77.4	13.487	0.870	0.786	-13.6	-54.4
118	4591	-0.214	34.662	2356.	2247.	*	444.7	28.2	2129.4	89.4	0.800	26.5	2138.6	81.8	12.750	0.894	0.831	-14.0	-50.7
119	4622	-0.223	34.658	2355.	2264.	*	505.7	32.1	2151.0	80.1	0.829	30.3	2160.0	72.9	14.441	0.940	0.741	-24.1	-60.2
120	4647	-0.229	34.658	2361.	2253.	*	448.7	28.5	2135.5	89.0	0.877	26.8	2144.9	81.3	12.902	0.889	0.826	-16.1	-52.3
121	4666	-0.230	34.659	2350.	2256.	*	467.4	29.7	2140.5	85.0	0.861	28.0	2149.0	78.2	13.449	0.871	0.795	-19.5	-55.8
122	4682	-0.230	34.650	2356.	2248.	*	447.0	28.4	2130.7	88.8	0.870	26.7	2148.2	81.1	12.930	0.880	0.824	-16.9	-53.2
123	4694	-0.252	34.650	2354.	2260.	*	494.3	31.4	2146.9	81.6	0.830	29.5	2156.1	74.3	14.242	0.846	0.755	-23.9	-60.3
124	4705	-0.260	34.659	2356.	2245.	*	437.5	27.0	2126.7	90.4	0.886	26.1	2136.3	82.6	12.700	0.896	0.839	-15.0	-52.3

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 431 1 13 2 79 2106 64 11.4 S 93 58.0 E 3624

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P=1ATM,T=INSITU*					CALC PARAMETERS P,T=INSITU									
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EO/KG)	TIT TC02* (E-6)	GC TC02* (E-5)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	PH	ICP (E-5)	DELTA CO3= (M/KG) (E-6)	DELTA CO3= (ARRG) (M/KG) (E-6)
101	4	2.353	33.700	2294.	2152.	*	* 365.0	21.1	2024.5	106.4	0.160	* 21.1	2024.5	106.4	6.918	0.160	1.053	60.1	39.3
102	10	2.361	33.709	2297.	2152.	*	* 350.5	20.7	2023.2	100.1	0.160	* 20.7	2023.2	100.1	5.002	0.167	1.071	61.0	41.0
103	42	-0.682	34.140	2317.	2184.	*	* 355.9	23.1	2059.3	101.6	0.161	* 23.1	2059.3	101.6	5.926	0.160	1.017	54.9	33.9
104	53	-1.070	34.265	2326.	2198.	*	* 366.5	24.1	2074.0	99.1	0.149	* 24.1	2074.9	99.0	7.127	0.147	0.994	52.2	31.2
105	136	1.259	34.580	2345.	2259.	*	* 558.5	33.8	2148.5	77.4	0.999	* 33.0	2148.8	77.2	10.139	0.994	0.783	29.9	8.8
106	211	1.517	34.655	2350.	2262.	*	* 552.1	32.7	2150.0	78.5	0.000	* 32.6	2151.2	78.2	10.106	0.992	0.794	30.4	9.0
107	353	1.628	34.690	2353.	2266.	*	* 558.1	33.0	2154.9	78.1	0.996	* 32.9	2155.6	77.5	10.414	0.982	0.789	28.6	5.9
108	502	1.498	34.711	2354.	2262.	*	* 535.5	31.0	2149.6	80.6	0.013	* 31.6	2150.6	79.0	10.174	0.993	0.812	29.7	7.6
109	711	1.328	34.722	2362.	2254.	*	* 476.2	28.5	2136.5	89.0	0.060	* 28.2	2138.0	87.0	9.296	0.832	0.894	36.0	13.4
110	919	1.133	34.721	2364.	2264.	*	* 501.3	30.2	2140.9	84.8	0.039	* 29.9	2150.0	83.4	9.944	0.802	0.849	29.9	6.7
111	1120	0.984	34.710	2365.	2266.	*	* 502.0	30.4	2151.3	84.3	0.038	* 30.0	2153.5	92.5	10.162	0.993	0.840	27.2	3.4
112	1335	0.952	34.714	2365.	2264.	*	* 492.4	30.8	2140.6	85.3	0.045	* 29.5	2151.3	83.2	10.190	0.992	0.847	26.0	1.6
114	1540	0.688	34.707	2364.	2270.	*	* 515.0	31.6	2156.6	81.0	0.027	* 30.9	2159.7	79.4	10.048	0.965	0.808	20.3	-4.7
115	1705	0.521	34.696	2365.	2267.	*	* 496.9	30.7	2152.5	83.0	0.040	* 29.9	2156.1	81.0	10.749	0.969	0.824	19.5	-6.3
116	2029	0.385	34.689	2366.	2266.	*	* 487.6	30.3	2150.9	84.9	0.040	* 29.4	2154.9	81.6	10.816	0.966	0.830	17.7	-0.9
117	2273	0.237	34.680	2366.	2269.	*	* 495.6	30.9	2154.7	83.3	0.041	* 30.0	2159.2	79.8	11.250	0.949	0.811	13.2	-14.1
118	2518	0.131	34.676	2364.	2274.	*	* 519.1	32.5	2161.7	79.0	0.021	* 31.5	2166.6	75.9	12.045	0.919	0.772	6.7	-21.4
119	2701	0.033	34.674	2366.	2206.	*	* 481.2	30.3	2150.0	84.9	0.051	* 29.2	2156.4	80.5	11.401	0.940	0.818	8.5	-20.5
120	2945	-0.033	34.674	2365.	2263.	*	* 473.2	29.0	2147.2	85.9	0.050	* 28.7	2153.1	81.2	11.513	0.939	0.825	7.1	-22.6
121	3129	-0.074	34.674	2360.	2265.	*	* 495.7	31.3	2151.4	82.2	0.030	* 30.1	2157.6	77.3	12.264	0.911	0.786	1.0	-29.3
122	3311	-0.115	34.675	2364.	2254.	*	* 445.3	28.2	2135.7	90.1	0.001	* 26.9	2142.5	84.6	11.273	0.940	0.860	6.0	-25.0
123	3484	-0.153	34.680	2360.	2263.	*	* 487.0	30.9	2148.9	83.2	0.045	* 29.5	2155.8	77.7	12.484	0.904	0.790	-3.1	-34.7
124	3604	-0.209	34.680	2363.	2260.	*	* 466.4	29.6	2143.9	96.4	0.062	* 28.2	2151.2	80.6	12.120	0.916	0.819	-1.9	-33.9

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 433 1 18 2 78 1151 53 0.9 S 103 1.5 E 3888
 433 4 18 2 78 2103 53 1.6 S 103 5.4 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TIT		CALC PARAMETERS P=1ATH.T=INSITU*					CALC PARAMETERS P.T=INSITU							
				(E-6)	(E-6)	PCO2 (ATH)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)
481	8	3.339	33.985	2295.	2142.	*	*	*	*	*	*	*	*	*	*	*	*	*
482	30	3.291	33.987	2296.	2136.	*	*	*	*	*	*	*	*	*	*	*	*	*
483	70	3.284	33.918	2296.	2140.	*	*	*	*	*	*	*	*	*	*	*	*	*
484	105	1.551	33.978	2300.	2160.	*	*	*	*	*	*	*	*	*	*	*	*	*
485	140	0.988	34.048	2304.	2103.	*	*	*	*	*	*	*	*	*	*	*	*	*
486	190	1.487	34.244	2317.	2224.	*	*	*	*	*	*	*	*	*	*	*	*	*
487	261	1.913	34.365	2327.	2239.	*	*	*	*	*	*	*	*	*	*	*	*	*
488	340	1.900	34.463	2335.	2251.	*	*	*	*	*	*	*	*	*	*	*	*	*
489	421	2.087	34.536	2342.	2261.	*	*	*	*	*	*	*	*	*	*	*	*	*
410	500	2.130	34.682	2349.	2261.	*	*	*	*	*	*	*	*	*	*	*	*	*
411	589	2.003	34.639	2353.	2266.	*	*	*	*	*	*	*	*	*	*	*	*	*
412	830	2.209	34.673	2352.	2295.	*	*	*	*	*	*	*	*	*	*	*	*	*
413	714	2.155	34.693	2354.	2259.	*	*	*	*	*	*	*	*	*	*	*	*	*
414	801	2.063	34.705	2356.	2267.	*	*	*	*	*	*	*	*	*	*	*	*	*
415	885	2.035	34.723	2359.	2261.	*	*	*	*	*	*	*	*	*	*	*	*	*
416	971	2.016	34.740	2357.	2249.	*	*	*	*	*	*	*	*	*	*	*	*	*
417	1050	1.927	34.740	2357.	2268.	*	*	*	*	*	*	*	*	*	*	*	*	*
418	1142	1.851	34.740	2360.	2258.	*	*	*	*	*	*	*	*	*	*	*	*	*
419	1227	1.800	34.751	2363.	2254.	*	*	*	*	*	*	*	*	*	*	*	*	*
420	1312	1.741	34.758	2362.	2262.	*	*	*	*	*	*	*	*	*	*	*	*	*
421	1399	1.600	34.749	2364.	2293.	*	*	*	*	*	*	*	*	*	*	*	*	*
422	1482	1.570	34.750	2364.	2297.	*	*	*	*	*	*	*	*	*	*	*	*	*
423	1567	1.482	34.743	2366.	2265.	*	*	*	*	*	*	*	*	*	*	*	*	*
424	1652	1.420	34.741	2367.	2268.	*	*	*	*	*	*	*	*	*	*	*	*	*
181	1746	1.369	34.742	2370.	2265.	*	*	*	*	*	*	*	*	*	*	*	*	*
182	1830	1.296	34.737	2369.	2267.	*	*	*	*	*	*	*	*	*	*	*	*	*
183	1932	1.221	34.734	2371.	2273.	*	*	*	*	*	*	*	*	*	*	*	*	*
184	2024	1.130	34.720	2360.	2260.	*	*	*	*	*	*	*	*	*	*	*	*	*
185	2117	1.020	34.721	2370.	2271.	*	*	*	*	*	*	*	*	*	*	*	*	*
186	2211	0.955	34.718	2360.	2272.	*	*	*	*	*	*	*	*	*	*	*	*	*
187	2303	0.892	34.714	2373.	2270.	*	*	*	*	*	*	*	*	*	*	*	*	*
188	2397	0.817	34.711	2370.	2260.	*	*	*	*	*	*	*	*	*	*	*	*	*
189	2491	0.789	34.706	2360.	2276.	*	*	*	*	*	*	*	*	*	*	*	*	*
110	2586	0.613	34.701	2371.	2276.	*	*	*	*	*	*	*	*	*	*	*	*	*
111	2679	0.551	34.698	2371.	2273.	*	*	*	*	*	*	*	*	*	*	*	*	*
112	2771	0.493	34.696	2371.	2272.	*	*	*	*	*	*	*	*	*	*	*	*	*
114	2858	0.432	34.692	2369.	2269.	*	*	*	*	*	*	*	*	*	*	*	*	*
115	2959	0.352	34.680	2369.	2270.	*	*	*	*	*	*	*	*	*	*	*	*	*
116	3053	0.284	34.687	2370.	2269.	*	*	*	*	*	*	*	*	*	*	*	*	*
117	3144	0.253	34.686	2360.	2272.	*	*	*	*	*	*	*	*	*	*	*	*	*
118	3238	0.194	34.684	2369.	2275.	*	*	*	*	*	*	*	*	*	*	*	*	*
119	3332	0.157	34.684	2365.	2274.	*	*	*	*	*	*	*	*	*	*	*	*	*
120	3426	0.121	34.684	2366.	2269.	*	*	*	*	*	*	*	*	*	*	*	*	*
121	3519	0.102	34.682	2369.	2283.	*	*	*	*	*	*	*	*	*	*	*	*	*
123	3613	0.100	34.682	2364.	2271.	*	*	*	*	*	*	*	*	*	*	*	*	*
124	3680	0.107	34.682	2370.	2274.	*	*	*	*	*	*	*	*	*	*	*	*	*
122	3753	0.009	34.682	2371.	2279.	*	*	*	*	*	*	*	*	*	*	*	*	*

CARBONATE REPORT

GEOSECS	INDIAN	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
		435	1	22 2 78	0940	39 57.2 S	189 58.3 E	4636
		435	3	22 2 78	1615	39 59.6 S	189 53.6 E	4665

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02* = TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (20/00)	MEASURED PARAMETERS				*CALC PARAMETERS P=1ATH.T=INSITU*				CALC PARAMETERS P.T=INSITU				DELTA CO3* (M/KG)	DELTA CO3= (ARRG)				
				TALK (E-6)	TIT (E-5)	* GC (E-6)	* TC02 (M/KG)	* PCO2 (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)			AM (E-9)	PH	ICP (E-6)	
301	5	15.492	34.848	2317.	2846.	*	*	* 311.2	11.5	1844.3	198.2	8.261	*	* 11.5	1844.3	198.2	5.481	8.261	1.942	144.5	123.9
303	115	18.978	34.799	2386.	2888.	*	*	* 336.6	14.3	1919.8	153.9	8.210	*	* 14.3	1920.1	153.6	6.188	8.214	1.567	187.8	86.1
307	218	18.488	34.775	2383.	2887.	*	*	* 331.9	14.4	1920.2	152.4	8.221	*	* 14.3	1920.7	152.8	6.115	8.214	1.549	184.7	83.6
309	305	18.821	34.712	2382.	2894.	*	*	* 348.5	15.8	1931.8	147.3	8.211	*	* 14.9	1932.5	146.7	6.316	9.288	1.492	98.7	77.3
311	419	18.847	34.794	2388.	2898.	*	*	* 353.3	15.5	1939.9	143.6	8.196	*	* 15.4	1939.9	142.7	6.594	8.181	1.456	93.9	72.3
313	618	9.347	34.678	2388.	2115.	*	*	* 373.1	16.9	1965.2	132.9	8.173	*	* 16.8	1966.5	131.7	7.878	8.158	1.338	81.4	59.3
315	818	7.557	34.524	2298.	2147.	*	*	* 431.9	28.6	2013.9	112.5	8.112	*	* 28.4	2015.6	111.8	8.298	8.891	1.124	59.8	36.4
317	998	5.228	34.373	2384.	2173.	*	*	* 465.4	24.2	2055.9	98.8	9.376	*	* 23.9	2057.9	96.3	9.188	8.837	8.978	42.5	19.4
318	1075	4.465	34.355	2311.	2134.	*	*	* 482.9	25.8	2075.2	93.8	8.859	*	* 25.4	2077.3	91.3	9.688	8.818	8.919	36.9	13.4
320	1272	3.488	34.488	2322.	2224.	*	*	* 535.9	29.7	2111.2	93.1	8.816	*	* 29.2	2113.6	81.2	18.826	7.966	8.818	24.9	8.9
322	1519	2.928	34.517	2348.	2249.	*	*	* 532.7	30.8	2134.8	94.2	8.828	*	* 29.4	2137.7	81.9	18.961	7.968	8.828	23.3	-1.4
324	1753	2.643	34.614	2352.	2268.	*	*	* 537.3	31.7	2147.6	88.7	8.881	*	* 31.8	2151.8	78.8	11.719	7.931	8.791	17.1	-8.4
181	1893	2.554	34.653	2356.	2263.	*	*	* 533.6	31.6	2158.1	81.3	8.884	*	* 30.9	2153.7	79.4	11.777	7.929	8.797	16.3	-9.6
182	2067	2.444	34.693	2355.	2259.	*	*	* 538.9	30.9	2145.4	82.7	8.814	*	* 38.1	2149.4	79.5	11.694	7.932	8.989	15.7	-18.7
183	2241	2.316	34.724	2361.	2258.	*	*	* 511.7	29.5	2142.1	86.4	8.835	*	* 28.6	2146.5	82.8	11.316	7.946	8.843	17.2	-9.8
184	2416	2.164	34.742	2364.	2257.	*	*	* 495.5	28.7	2139.8	88.5	8.848	*	* 27.8	2144.6	84.6	11.168	7.957	7.862	17.2	-18.4
186	2764	1.829	34.749	2367.	2252.	*	*	* 463.6	27.2	2132.8	92.8	8.873	*	* 26.2	2137.6	88.2	18.878	7.964	8.899	16.9	-11.9
187	2932	1.648	34.745	2367.	2263.	*	*	* 497.8	29.4	2146.6	97.8	8.844	*	* 28.3	2152.4	82.3	11.317	7.928	8.939	9.8	-28.3
188	3181	1.498	34.748	2366.	2264.	*	*	* 581.5	29.8	2148.3	85.9	8.841	*	* 28.6	2154.4	81.8	12.112	7.917	8.825	5.6	-24.3
118	3441	1.182	34.724	2372.	2272.	*	*	* 584.7	38.4	2156.6	95.8	8.838	*	* 29.8	2163.4	79.6	12.589	7.988	8.818	-8.1	-31.2
111	3611	1.842	34.718	2378.	2267.	*	*	* 498.4	29.7	2158.8	96.5	8.849	*	* 28.3	2158.8	88.7	12.481	7.984	8.821	-1.2	-33.8
112	3758	0.942	34.712	2371.	2267.	*	*	* 485.3	29.5	2158.5	87.1	8.852	*	* 28.8	2158.8	81.8	12.567	7.981	8.824	-3.2	-35.7
114	3958	0.987	34.718	2376.	2269.	*	*	* 475.9	29.9	2151.3	88.7	8.861	*	* 27.5	2153.3	82.3	12.514	7.983	8.837	-4.2	-37.3
116	4297	3.957	34.785	2378.	2277.	*	*	* 523.4	31.9	2163.7	81.4	8.822	*	* 38.2	2172.8	74.8	14.167	7.949	8.761	-16.5	-58.9
119	4496	3.858	34.785	2383.	2277.	*	*	* 488.7	29.3	2159.3	88.4	8.858	*	* 27.6	2168.3	81.1	13.251	7.877	8.825	-13.2	-48.5
113	4703	3.354	34.785	2374.	2257.	*	*	* 474.5	29.9	2149.4	88.7	8.852	*	* 27.2	2158.4	81.3	13.188	7.888	8.828	-13.4	-49.8
121	4373	3.354	34.785	2369.	2273.	*	*	* 512.5	31.4	2159.2	82.4	8.827	*	* 29.6	2168.1	75.3	14.367	7.843	8.766	-28.3	-55.9
122	4709	3.833	34.785	2373.	2266.	*	*	* 473.3	28.9	2149.5	98.7	8.862	*	* 27.2	2157.7	81.2	13.355	7.978	8.826	-14.6	-58.2
123	4808	3.856	34.785	2374.	2277.	*	*	* 589.9	31.1	2152.4	93.6	8.835	*	* 29.3	2171.4	76.3	14.215	7.847	8.777	-19.6	-55.3
124	4813	3.782	34.785	2374.	2269.	*	*	* 431.5	29.3	2152.0	87.7	8.856	*	* 27.6	2161.2	88.2	13.491	7.878	8.816	-15.9	-51.7

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE SGT DEPTH
 436 1 8 3 78 1531 29 13.2 S 189 58.1 E 5572
 436 3 9 3 78 8851 29 14.3 S 189 58.1 E 5568

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (E0/KG)	TIT (M/KG)	GC TC02 (M/KG)	CALC PARAMETERS P=1ATH,T=INSITU					CALC. PARAMETERS P,T=INSITU							
							PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARAG) (M/KG)	
381	10	24.521	35.734	2349.	1992.	*	328.6	9.2	1731.4	251.4	8.274	9.2	1731.4	251.4	5.328	8.274	2.633	286.2	185.8
382	34	21.586	35.888	2355.	2828.	*	315.1	9.8	1775.1	235.2	8.273	9.7	1775.1	235.1	5.341	8.272	2.473	189.6	169.2
383	65	20.449	35.919	2354.	2829.	*	315.7	18.1	1791.8	227.9	8.278	18.8	1791.2	227.8	5.399	8.268	2.398	182.1	161.6
384	86	18.898	35.788	2349.	2838.	*	382.3	18.3	1818.4	217.3	8.279	18.3	1818.6	217.1	5.292	8.276	2.278	171.2	158.5
385	128	16.685	35.715	2347.	2833.	*	387.7	18.9	1836.6	285.5	8.269	18.9	1836.9	285.2	5.428	8.265	2.149	159.8	138.3
386	166	15.285	35.574	2336.	2871.	*	338.1	12.2	1872.9	185.9	8.239	12.2	1873.3	185.5	5.839	8.234	1.934	138.8	118.8
387	208	14.881	35.395	2331.	2871.	*	318.7	12.3	1876.7	182.1	8.249	12.2	1877.2	181.6	5.736	8.241	1.384	134.6	113.6
388	254	12.833	35.228	2322.	2888.	*	327.8	13.1	1897.8	169.9	8.234	13.1	1897.6	169.3	5.952	8.225	1.748	121.9	188.8
389	299	11.718	35.856	2311.	2888.	*	342.8	14.2	1916.5	157.3	8.214	14.1	1917.2	156.7	6.259	8.284	1.618	188.9	97.6
310	355	10.492	34.898	2384.	2185.	*	368.2	15.9	1947.1	141.9	8.182	15.8	1947.9	141.2	6.778	8.169	1.444	92.9	71.5
311	426	9.656	34.764	2383.	2188.	*	362.5	16.1	1952.7	139.2	8.186	16.8	1953.6	138.4	6.757	8.178	1.418	89.3	67.9
312	534	8.721	34.648	2294.	2123.	*	398.7	18.3	1988.4	124.3	8.146	18.2	1981.6	123.3	6.488	8.126	1.252	73.6	51.7
313	678	7.814	34.489	2295.	2155.	*	453.1	22.1	2026.9	196.8	8.891	21.9	2028.3	184.8	8.688	8.866	1.868	53.9	31.6
314	797	5.868	34.484	2387.	2199.	*	527.8	27.5	2083.2	88.3	8.826	27.2	2084.7	87.1	18.184	7.995	8.878	35.8	12.3
315	917	4.168	34.456	2328.	2229.	*	558.4	29.7	2115.5	83.9	8.889	29.3	2117.2	82.5	18.638	7.973	8.833	29.3	6.3
316	1038	3.881	34.584	2342.	2254.	*	595.6	32.5	2142.8	78.7	7.978	32.1	2144.8	77.1	11.553	7.937	8.788	23.8	-8.4
317	1165	3.548	34.553	2357.	2267.	*	585.8	32.3	2154.8	79.9	7.985	31.8	2157.1	78.1	11.475	7.948	8.791	22.8	-8.9
319	1411	2.934	34.629	2368.	2281.	*	623.9	35.2	2171.4	74.4	7.959	34.5	2174.8	72.4	12.519	7.982	8.735	14.9	-3.6
320	1539	2.795	34.662	2378.	2286.	*	681.9	34.1	2174.8	77.1	7.974	33.4	2177.7	74.9	12.224	7.913	8.761	16.2	-8.7
321	1659	2.641	34.685	2376.	2279.	*	545.9	31.1	2164.2	83.8	8.814	38.4	2167.4	81.2	11.278	7.948	8.828	21.3	-3.9
322	1786	2.475	34.784	2388.	2287.	*	559.8	32.1	2173.2	81.8	8.883	31.3	2176.6	79.8	11.683	7.932	8.884	18.8	-7.6
323	1909	2.349	34.716	2389.	2299.	*	572.6	33.8	2185.6	88.5	7.995	32.2	2189.3	77.6	12.842	7.919	8.789	15.3	-18.7
324	2832	2.237	34.722	2394.	2291.	*	528.7	38.1	2173.7	97.2	8.834	29.3	2177.7	84.8	11.141	7.953	8.855	28.5	-5.9
101	2884	2.197	34.724	2391.	2382.	*	574.5	33.3	2188.7	88.8	7.994	32.4	2192.8	76.9	12.288	7.911	8.782	12.8	-13.7
102	2284	2.847	34.726	2395.	2388.	*	548.1	31.9	2185.8	83.1	8.813	31.8	2189.4	79.6	11.381	7.922	8.818	13.5	-13.7
183	2485	1.927	34.729	2397.	2299.	*	538.3	31.8	2181.8	85.1	8.826	38.8	2186.8	81.2	11.841	7.927	8.827	13.8	-14.8
184	2684	1.883	34.729	2397.	2296.	*	528.5	38.6	2179.2	86.2	8.833	29.5	2184.6	81.9	11.869	7.926	8.834	11.4	-17.8
185	2933	1.666	34.729	2397.	2294.	*	518.5	38.1	2176.6	87.2	8.848	29.8	2182.5	82.5	11.947	7.923	8.848	9.2	-28.1
186	3182	1.546	34.727	2396.	2295.	*	515.2	38.6	2178.3	86.2	9.835	29.3	2184.6	81.1	12.351	7.988	8.825	4.8	-25.4
187	3433	1.446	34.727	2396.	2298.	*	524.1	31.2	2182.2	84.6	8.828	29.8	2189.8	79.2	12.862	7.891	8.886	-8.3	-31.4
188	3688	1.351	34.724	2396.	2297.	*	518.7	31.8	2188.9	85.1	8.832	29.6	2188.2	79.3	13.858	7.884	8.887	-3.4	-35.4
189	3927	1.268	34.719	2397.	2298.	*	488.6	29.3	2171.4	89.3	8.856	27.8	2179.3	82.9	12.631	7.899	8.843	-3.1	-36.8
110	4177	1.215	34.718	2397.	2298.	*	487.5	29.3	2171.5	89.2	8.856	27.7	2179.9	82.4	12.989	7.889	8.839	-7.8	-48.9
111	4426	1.171	34.717	2394.	2285.	*	479.2	28.8	2165.9	98.2	8.862	27.2	2174.8	83.8	13.824	7.865	8.844	-18.1	-45.8
112	4426	1.171	34.718	2394.	2287.	*	485.7	29.2	2168.6	89.2	8.857	27.6	2177.5	81.9	13.189	7.888	8.834	-11.1	-46.8
114	4932	1.186	34.714	2387.	2279.	*	479.1	28.9	2168.6	89.5	8.861	27.1	2178.5	81.4	13.699	7.863	8.829	-19.4	-56.4
115	5179	1.183	34.713	2386.	2288.	*	486.8	29.3	2162.2	88.5	8.855	27.4	2172.5	80.1	14.216	7.847	8.815	-24.8	-62.8
116	5179	1.183	34.713	2384.	2281.	*	456.8	29.9	2164.2	86.9	8.847	28.8	2174.4	78.6	14.582	7.839	8.888	-26.3	-64.3
117	5426	1.114	34.712	2383.	2277.	*	485.8	29.3	2159.4	88.4	8.855	27.3	2178.2	79.6	14.536	7.838	8.818	-29.5	-68.5
118	5454	1.114	34.714	2383.	2278.	*	488.5	29.5	2168.7	87.9	8.853	27.4	2171.5	79.1	14.671	7.834	8.884	-38.5	-69.7
119	5475	1.118	34.711	2383.	2282.	*	582.9	38.3	2165.8	85.8	8.841	28.3	2176.6	77.1	15.118	7.821	8.785	-32.8	-72.1
128	5489	1.112	34.711	2385.	2277.	*	478.8	28.9	2158.6	89.5	8.861	26.9	2169.6	88.5	14.433	7.841	8.819	-29.6	-69.8
124	5499	1.114	34.711	2384.	2276.	*	478.8	28.9	2157.6	89.5	8.861	26.9	2168.6	88.5	14.458	7.848	8.819	-29.8	-69.2
121	5519	1.117	34.714	2388.	2277.	*	495.1	29.9	2168.3	86.8	8.847	27.8	2171.2	78.8	14.968	7.825	8.793	-32.7	-72.2
122	5536	1.118	34.714	2382.	2282.	*	586.1	38.5	2166.2	85.3	8.838	28.4	2177.1	76.5	15.266	7.815	8.778	-34.5	-74.8
123	5551	1.121	34.714	2384.	2288.	*	492.3	29.7	2163.8	87.4	8.858	27.6	2174.8	78.4	14.987	7.827	8.798	-32.8	-72.4

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CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 437 1 11 3 78 0149 24 28.5 S 184 58.8 E 5638
 437 3 11 3 78 0633 24 30.3 S 184 58.3 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION

TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC. PARAMETERS P=1ATH,T=INSITU						CALC. PARAMETERS P,T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/00)	TALK (EQ/KG)	TIT TC02* (M/KG)	GC TC02* (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARRG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)				(E-6)	(E-6)
101	8	24.37	35.720	2347.	1994.	*	323.6	9.3	1736.1	248.6	8.271	9.3	1736.1	248.6	5.367	8.278	2.684	283.4	183.8
102	40	23.2	35.781	2344.	1997.	*	315.8	9.4	1743.6	244.8	8.276	9.4	1743.7	243.9	5.316	8.274	2.553	198.5	178.8
103	70	21.2	35.638	2342.	2011.	*	311.4	9.7	1768.8	232.4	8.276	9.7	1769.8	232.3	5.320	8.273	2.427	186.5	166.8
104	110	19.5	35.738	2345.	2036.	*	322.7	18.6	1808.5	217.8	8.259	18.5	1808.7	216.7	5.554	8.255	2.278	178.6	158.8
105	160	17.94	35.742	2356.	2875.	*	349.8	11.9	1864.8	198.2	8.229	11.9	1865.2	197.9	5.978	8.223	2.873	151.4	138.7
106	211	16.6	35.668	2343.	2861.	*	323.5	11.5	1851.3	197.7	8.251	11.5	1852.3	197.2	5.787	8.244	2.862	158.3	129.4
107	241	15.2	35.538	2337.	2882.	*	346.2	12.9	1889.6	179.6	8.222	12.8	1890.1	179.1	6.113	8.214	1.865	131.9	118.9
108	301	13.2	35.288	2326.	2982.	*	331.1	13.1	1897.5	171.4	8.232	13.8	1898.2	178.7	6.886	8.221	1.766	123.8	101.8
109	362	11.611	35.856	2328.	2898.	*	338.2	13.7	1914.3	161.9	8.228	13.7	1915.2	161.2	6.898	8.215	1.656	112.9	91.5
110	402	10.61	34.983	2385.	2899.	*	355.7	15.3	1937.4	146.3	8.196	15.2	1938.3	145.4	6.589	8.181	1.488	96.8	75.3
111	467	9.58	34.757	2384.	2184.	*	358.9	15.6	1946.2	142.2	8.198	15.5	1947.2	141.2	6.591	8.181	1.439	92.1	78.4
112	550	8.643	34.637	2296.	2128.	*	386.1	17.8	1974.9	127.3	8.158	17.6	1976.1	126.3	7.286	8.137	1.282	76.4	54.5
113	619	7.361	34.522	2381.	2158.	*	429.2	28.6	2016.9	112.4	8.114	28.5	2018.2	111.3	8.112	8.891	1.127	68.9	38.7
114	691	5.746	34.451	2318.	2193.	*	508.8	25.9	2073.8	93.3	8.843	25.7	2075.2	92.2	9.621	8.817	0.931	41.8	18.6
115	769	5.113	34.462	2323.	2221.	*	557.5	29.8	2186.4	85.5	8.887	28.7	2187.9	84.3	18.543	7.977	8.852	32.5	9.9
116	839	4.862	34.584	2335.	2244.	*	683.6	31.7	2132.2	88.1	7.976	31.4	2133.7	78.9	11.394	7.943	8.798	26.5	3.6
117	918	4.677	34.561	2368.	2276.	*	642.3	34.8	2164.8	77.3	7.955	33.6	2166.5	76.8	12.855	7.919	8.778	22.9	-8.1
118	986	4.414	34.581	2359.	2278.	*	649.6	34.7	2167.7	75.7	7.949	34.3	2169.5	74.3	12.387	7.918	8.753	28.6	-2.6
119	1088	4.841	34.594	2372.	2286.	*	621.8	33.6	2174.1	78.3	7.967	33.1	2176.2	76.7	11.896	7.925	8.778	22.1	-1.4
120	1186	3.734	34.687	2365.	2288.	*	649.9	35.6	2178.2	74.2	7.947	35.8	2180.4	72.5	12.597	7.988	8.736	17.1	-6.7
121	1284	3.329	34.683	2361.	2284.	*	643.3	35.7	2174.7	73.6	7.948	35.2	2177.1	71.8	12.671	7.897	8.728	15.4	-8.7
122	1387	3.134	34.644	2369.	2284.	*	684.7	33.8	2172.5	77.7	7.974	33.2	2175.1	75.6	12.865	7.918	8.768	18.3	-6.8
123	1498	2.968	34.678	2381.	2287.	*	566.2	31.9	2172.8	92.4	8.881	31.2	2175.7	88.1	11.423	7.942	8.814	21.9	-2.8
124	1587	2.743	34.683	2378.	2288.	*	577.4	32.8	2175.8	88.3	7.992	32.1	2178.8	77.9	11.782	7.929	8.792	18.7	-6.3

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 438 1 12 3 73 1927 19 29.3 S 181 17.3 E 5842
 438 3 13 3 78 8522 19 26.9 S 181 15.1 E

GC CO2 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC PARAMETERS P=1ATH,T=INSITU						CALC. PARAMETERS P.T=INSITU									
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/00)	TALK (ED/KG)	TC02 (M/KG)	GC (M/KG)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM (E-9)	PM (E-9)	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)	
				(E-5)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(M/KG)	(E-6)	(E-6)			(E-6)	(M/KG)	(M/KG)	
301	8	26.62	35.292	2311.	1957.	*	*	337.2	9.2	1698.2	249.7	8.259	*	9.2	1698.2	249.7	5.517	0.258	2.582	204.5	184.1
302	53	24.3	35.353	2309.	1961.	*	*	314.9	9.1	1707.1	244.8	8.276	*	9.1	1707.3	244.7	5.320	0.274	2.529	199.1	178.7
303	102	21.9	35.449	2327.	1995.	*	*	312.9	9.6	1732.2	233.2	8.274	*	9.6	1732.3	232.9	5.358	0.271	2.428	187.8	166.4
304	151	20.1	35.624	2333.	2026.	*	*	329.8	10.6	1799.6	215.8	8.251	*	10.6	1800.8	215.4	5.670	0.246	2.250	169.1	148.4
305	201	18.27	35.668	2330.	2062.	*	*	356.8	12.1	1855.1	194.8	8.219	*	12.1	1855.6	194.3	6.132	0.212	2.832	147.6	126.8
306	251	15.9	35.618	2337.	2063.	*	*	324.6	11.8	1859.2	192.8	8.247	*	11.7	1859.8	191.4	5.775	0.238	1.992	144.2	123.2
307	301	13.77	35.372	2324.	2091.	*	*	359.6	14.8	1912.3	164.6	8.203	*	13.9	1913.2	163.9	6.425	0.192	1.708	116.3	95.1
308	351	12.88	35.143	2315.	2093.	*	*	351.4	14.4	1921.6	157.8	8.205	*	14.3	1922.4	156.2	6.413	0.193	1.618	108.1	86.7
309	412	10.605	34.927	2303.	2107.	*	*	376.4	16.2	1958.7	148.1	8.174	*	16.1	1951.6	139.3	6.932	0.159	1.426	98.6	69.8
311	532	8.73	34.671	2298.	2115.	*	*	371.8	17.1	1966.5	131.4	8.173	*	16.9	1967.7	138.4	7.028	0.153	1.325	98.7	58.8
312	593	7.921	34.595	2296.	2142.	*	*	438.8	20.3	2007.5	114.2	8.114	*	20.1	2008.7	113.1	8.098	0.092	1.147	62.9	48.8
313	638	7.07	34.566	2307.	2192.	*	*	544.8	26.3	2073.8	92.3	8.021	*	26.2	2074.2	91.5	10.086	0.096	0.927	48.9	18.7
314	718	6.46	34.666	2335.	2245.	*	*	649.2	32.2	2132.8	88.8	7.953	*	31.9	2134.1	79.8	11.871	0.092	0.801	27.7	5.2
315	808	6.023	34.637	2348.	2263.	*	*	668.4	33.7	2151.6	77.8	7.942	*	33.3	2153.1	76.6	12.288	0.091	0.778	24.6	1.9
316	893	5.641	34.647	2357.	2279.	*	*	697.8	35.6	2169.8	74.4	7.925	*	35.2	2170.7	73.1	12.879	0.098	0.743	28.4	-2.6
317	992	5.221	34.646	2361.	2292.	*	*	736.1	38.2	2183.7	70.1	7.902	*	37.7	2185.5	68.8	13.715	0.093	0.699	15.2	-8.8
318	1193	4.515	34.648	2373.	2304.	*	*	721.3	38.3	2195.4	70.3	7.909	*	37.8	2197.5	68.7	13.745	0.092	0.697	13.3	-10.5
319	1392	3.913	34.668	2378.	2296.	*	*	677.5	36.8	2186.7	72.5	7.931	*	36.2	2189.3	70.5	13.386	0.096	0.717	13.3	-11.8
320	1592	3.271	34.684	2377.	2293.	*	*	615.8	34.2	2181.5	77.3	7.969	*	33.5	2184.5	74.9	12.432	0.095	0.762	15.8	-9.1
321	1798	2.822	34.718	2381.	2295.	*	*	597.6	33.8	2182.9	78.3	7.979	*	33.8	2186.3	75.7	12.371	0.098	0.778	14.6	-10.9
322	1988	2.529	34.716	2387.	2299.	*	*	584.2	33.4	2186.2	79.4	7.988	*	32.5	2190.8	76.4	12.336	0.099	0.778	13.5	-12.7
323	2176	2.231	34.725	2391.	2308.	*	*	567.3	32.8	2186.2	81.8	7.999	*	31.9	2190.4	77.7	12.241	0.092	0.791	12.8	-14.8
181	2339	2.073	34.728	2394.	2297.	*	*	548.4	31.4	2181.5	84.1	8.018	*	30.5	2186.1	80.5	11.885	0.095	0.819	13.8	-13.5
324	2377	2.059	34.729	2394.	2308.	*	*	552.2	32.1	2185.2	82.6	8.009	*	31.2	2189.9	79.8	12.173	0.095	0.804	11.9	-15.6
182	2585	1.873	34.729	2394.	2294.	*	*	524.7	30.7	2177.6	95.6	8.029	*	29.7	2182.8	81.5	11.855	0.092	0.838	12.2	-16.8
183	2838	1.684	34.727	2394.	2294.	*	*	528.8	30.7	2177.7	95.6	8.031	*	29.6	2183.3	81.1	12.878	0.098	0.825	8.8	-20.1
184	3085	1.559	34.724	2396.	2293.	*	*	597.6	30.1	2175.8	87.1	8.041	*	28.9	2181.9	82.2	12.871	0.098	0.837	7.8	-22.8
185	3332	1.433	34.723	2396.	2296.	*	*	516.8	30.8	2179.5	85.7	8.034	*	29.5	2186.2	80.4	12.979	0.098	0.818	2.2	-28.6
186	3583	1.332	34.729	2396.	2293.	*	*	583.4	30.1	2175.8	87.1	8.044	*	28.7	2182.9	81.4	12.575	0.098	0.828	8.8	-31.7
187	3831	1.277	34.717	2397.	2289.	*	*	485.4	29.1	2170.1	89.8	8.058	*	27.6	2177.8	83.5	12.441	0.095	0.858	-1.1	-33.7
188	4079	1.226	34.717	2394.	2293.	*	*	508.3	30.5	2176.4	96.1	8.039	*	28.9	2184.5	79.6	13.319	0.096	0.818	-8.5	-42.8
189	4328	1.206	34.715	2393.	2287.	*	*	498.1	29.5	2168.8	88.7	8.053	*	27.8	2177.5	81.7	13.181	0.098	0.831	-9.9	-44.4
118	4577	1.177	34.713	2392.	2281.	*	*	472.3	28.4	2161.3	91.3	8.068	*	26.7	2170.5	83.7	13.838	0.085	0.852	-11.6	-47.1
111	4826	1.161	34.715	2388.	2285.	*	*	498.1	30.8	2168.8	87.8	8.046	*	28.2	2177.6	79.2	14.854	0.082	0.786	-19.9	-56.4
112	5074	1.171	34.713	2386.	2283.	*	*	497.7	30.8	2166.1	86.9	8.046	*	28.8	2176.2	78.8	14.392	0.082	0.802	-24.3	-61.9
115	5334	1.196	34.713	2387.	2275.	*	*	467.9	28.1	2155.1	91.7	8.071	*	26.2	2155.9	82.9	13.993	0.087	0.843	-24.5	-63.2
116	5572	1.224	34.714	2386.	2275.	*	*	478.7	28.3	2155.7	91.8	8.068	*	26.3	2166.9	81.8	14.284	0.085	0.833	-29.6	-69.3
119	5691	1.236	34.713	2386.	2275.	*	*	471.4	28.3	2155.6	91.1	8.068	*	26.3	2167.8	81.7	14.461	0.084	0.832	-31.9	-72.1
121	5757	1.245	34.712	2386.	2273.	*	*	464.8	27.9	2153.8	92.2	8.073	*	25.8	2164.6	82.6	14.355	0.083	0.840	-32.2	-72.7
124	5819	1.252	34.711	2385.	2275.	*	*	475.8	28.5	2155.9	98.6	8.065	*	26.4	2167.6	81.8	14.742	0.081	0.825	-34.8	-75.6

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 439 1 15 3 78 1984 13 2.2 S 97 9.9 E 4699

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION

TCO2=TCO2-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (00/KG)	TIT (E-6)	GC TCO2 (M/KG)	CALC PARAMETERS P=1ATM.T=INSITU					CALC. PARAMETERS P.T=INSITU					DELTA CO3 (CALC)	DELTA CO3 (ARAG)		
							PCO2 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH			ICP (M/KG)	DELTA CO3 (M/KG)
101	21	28.751	34.423	2251.	1908.	*	* 342.3	8.9	1643.6	247.5	0.254	*	* 8.9	1643.7	247.4	5.582	8.253	2.497	282.2	181.9
102	44	28.839	34.578	2265.	1913.	*	* 345.2	9.0	1655.7	248.3	0.252	*	* 9.0	1655.8	248.2	5.612	8.251	2.516	282.9	182.5
103	55	27.25	34.647	2272.	1914.	*	* 321.1	8.6	1653.2	252.2	0.274	*	* 8.6	1653.3	252.0	5.344	8.272	2.568	286.6	186.2
104	78	24.483	34.742	2274.	1938.	*	* 318.4	9.1	1689.1	237.8	0.272	*	* 9.1	1689.3	237.6	5.377	8.269	2.428	191.9	171.4
105	98	23.58	34.847	2285.	1957.	*	* 323.6	9.5	1716.5	238.9	0.263	*	* 9.5	1716.8	238.7	5.495	8.268	2.357	184.9	164.3
106	151	18.438	34.958	2293.	2079.	*	* 478.8	15.9	1987.8	155.3	0.114	*	* 15.9	1988.1	155.8	7.787	8.189	1.588	188.5	87.7
107	251	13.362	35.046	2324.	2127.	*	* 429.1	16.9	1967.4	142.7	0.137	*	* 16.8	1967.9	142.2	7.452	8.128	1.461	94.9	73.7
108	274	13.286	35.227	2319.	2185.	*	* 388.9	15.3	1937.1	152.6	0.174	*	* 15.2	1937.7	152.0	6.857	8.164	1.578	184.5	83.3
109	329	11.371	35.858	2389.	2187.	*	* 378.1	15.9	1947.8	144.1	0.175	*	* 15.8	1947.8	143.4	6.868	8.164	1.474	95.4	74.1
110	376	9.684	34.821	2297.	2117.	*	* 394.3	17.5	1989.5	138.8	0.153	*	* 17.5	1978.3	129.2	7.264	8.139	1.319	88.7	59.2
111	425	8.678	34.692	2298.	2197.	*	* 484.5	22.3	2027.7	187.8	0.071	*	* 22.1	2028.6	186.3	8.813	8.855	1.881	57.4	35.7
112	473	8.271	34.669	2388.	2184.	*	* 538.3	25.1	2051.2	97.7	0.838	*	* 24.9	2062.1	97.8	9.726	8.812	0.986	47.7	25.9
113	528	7.884	34.668	2318.	2288.	*	* 586.7	27.8	2089.9	98.3	7.996	*	* 27.6	2098.9	89.3	18.565	7.976	8.918	39.8	17.9
114	593	7.141	34.668	2336.	2254.	*	* 718.1	34.4	2143.3	76.3	7.928	*	* 34.1	2144.4	75.5	12.669	7.897	8.767	25.2	3.1
115	669	6.348	34.633	2349.	2273.	*	* 724.6	36.1	2163.5	73.5	7.911	*	* 35.8	2164.7	72.5	13.831	7.885	8.736	21.6	-8.7
116	754	5.891	34.644	2355.	2288.	*	* 719.4	36.4	2178.6	73.8	7.913	*	* 38.1	2178.8	71.9	13.875	7.884	8.731	28.3	-2.3
117	943	5.432	34.632	2361.	2298.	*	* 731.3	37.6	2181.2	71.2	7.985	*	* 37.2	2182.7	70.8	13.416	7.872	8.711	17.6	-5.2
118	938	5.814	34.638	2378.	2295.	*	* 781.5	36.6	2185.2	73.2	7.922	*	* 36.2	2186.9	71.9	13.819	7.885	8.738	18.8	-4.3
119	1022	4.717	34.544	2375.	2383.	*	* 718.7	37.5	2193.8	71.7	7.916	*	* 37.8	2195.6	70.3	13.383	7.876	8.714	16.4	-6.9
120	1111	4.422	34.652	2379.	2383.	*	* 683.6	36.5	2192.8	73.7	7.931	*	* 36.8	2194.9	72.2	12.956	7.888	8.733	17.5	-6.1
121	1201	4.198	34.662	2379.	2384.	*	* 683.2	36.7	2194.8	73.2	7.931	*	* 36.2	2196.3	71.5	13.888	7.883	8.727	16.8	-7.8
122	1291	3.975	34.677	2381.	2388.	*	* 848.6	35.2	2188.7	76.1	7.951	*	* 34.6	2191.1	74.3	12.594	7.988	8.755	18.8	-6.1
123	1398	3.694	34.692	2383.	2382.	*	* 642.8	35.2	2198.8	76.1	7.954	*	* 34.6	2193.4	74.1	12.616	7.899	8.753	16.9	-7.5
124	1487	3.472	34.726	2384.	2318.	*	* 672.8	37.1	2288.2	72.7	7.935	*	* 36.4	2282.9	78.6	13.313	7.876	8.719	12.5	-12.1

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
448	1	17 3 78	0612	9 21.3 S	95 1.7 E	5255
448	3	17 3 78	1548	9 19.3 S	95 8.3 E	
448	7	18 3 78	1553	9 20.5 S	94 53.2 E	

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-13 (UM/KG)

MEASURED PARAMETERS				CALC PARAMETERS P=1ATH,T=INSITU*				CALC. PARAMETERS P.T=INSITU				DELTA	DELTA						
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/88)	TIT (EQ/KG)	TC02 (M/KG)	GC (E-6)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (E-6)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (E-6)	PH	ICP (E-6)	CO2= (M/KG)	CO3= (M/KG)	CO3= (M/KG)
381	17	29.149	34.188	2249.	1889.	*	338.3	8.5	1626.7	253.8	8.268	0.5	1626.7	253.8	5.481	0.260	2.544	288.6	188.3
382	63	23.620	34.686	2278.	1976.	*	362.5	18.7	1751.2	214.1	8.223	18.7	1751.4	214.0	6.818	0.221	2.171	168.3	147.8
383	88	20.532	34.522	2288.	2055.	*	474.8	15.2	1876.5	163.4	8.118	15.2	1876.6	163.2	7.672	0.115	1.652	117.3	96.7
384	188	18.938	34.639	2283.	2097.	*	555.7	18.6	1948.8	138.4	8.853	18.6	1948.2	138.2	8.923	0.858	1.493	92.1	71.4
385	127	15.798	34.713	2298.	2158.	*	623.9	22.9	2012.6	114.6	7.999	22.8	2012.8	114.4	10.118	7.999	1.164	67.9	47.1
386	162	13.881	34.687	2304.	2168.	*	624.9	24.3	2036.8	186.9	7.993	24.2	2037.1	186.7	10.312	7.987	1.885	59.9	38.9
387	199	12.172	34.738	2313.	2198.	*	676.7	27.7	2073.6	94.7	7.956	27.6	2073.9	94.4	11.255	7.949	0.961	47.3	26.3
388	257	11.432	34.884	2314.	2288.	*	691.4	29.8	2088.5	98.5	7.944	28.9	2087.8	98.1	11.622	7.933	0.921	42.6	21.4
389	351	10.289	34.639	2314.	2214.	*	698.0	38.4	2097.8	85.8	7.933	38.3	2098.4	85.3	11.964	7.922	0.872	37.8	15.6
318	478	9.656	34.887	2322.	2228.	*	697.1	31.6	2113.9	82.5	7.933	31.4	2114.7	81.9	12.165	7.915	0.833	32.6	18.9
311	592	7.969	34.748	2331.	2258.	*	738.2	34.7	2139.4	75.9	7.987	34.5	2140.4	75.1	13.855	7.884	0.763	24.9	2.8
312	698	7.237	34.743	2346.	2278.	*	751.0	36.2	2168.2	73.6	7.988	35.9	2161.4	72.7	13.418	7.873	0.748	21.6	-8.8
314	894	5.932	34.711	2365.	2362.	*	798.1	48.2	2194.1	67.7	7.874	39.8	2193.7	66.5	14.581	7.839	0.677	13.8	-9.2
315	993	5.417	34.698	2375.	2384.	*	737.9	38.8	2194.5	71.5	7.984	37.5	2196.3	70.2	13.648	7.865	0.714	16.6	-6.6
316	1092	5.828	34.781	2388.	2312.	*	744.4	38.8	2283.1	78.8	7.988	38.3	2285.1	68.5	13.915	7.857	0.697	14.1	-9.4
317	1198	4.663	34.695	2384.	2312.	*	714.8	37.7	2282.3	72.8	7.916	37.2	2284.4	78.3	13.534	7.869	0.715	15.8	-8.7
318	1292	4.324	34.787	2387.	2318.	*	721.9	38.6	2288.8	78.5	7.918	38.8	2211.2	68.8	13.837	7.859	0.788	12.5	-11.5
319	1393	4.148	34.729	2398.	2324.	*	736.1	39.6	2215.1	69.3	7.982	39.8	2217.6	67.4	14.238	7.847	0.686	18.2	-14.1
320	1489	3.841	34.741	2393.	2314.	*	668.2	35.9	2282.7	73.4	7.943	35.3	2285.4	73.3	13.888	7.886	0.746	15.2	-9.4
321	1637	3.268	34.738	2397.	2317.	*	641.6	35.7	2285.5	75.8	7.955	35.8	2288.6	73.5	12.892	7.898	0.748	13.9	-11.1
322	1786	2.977	34.748	2399.	2318.	*	638.9	35.5	2286.2	76.3	7.961	34.7	2289.6	73.7	12.896	7.898	0.751	12.8	-12.8
323	1933	2.712	34.748	2402.	2318.	*	611.6	34.7	2285.4	77.8	7.973	33.9	2289.1	75.8	12.719	7.896	0.763	12.5	-13.5
324	2088	2.437	34.735	2402.	2313.	*	583.1	33.5	2199.3	88.3	7.991	32.6	2283.3	77.1	12.368	7.988	0.785	13.2	-13.3
181	2886	2.416	34.739	2404.	2312.	*	571.8	32.8	2197.4	81.8	7.999	31.9	2281.4	78.6	12.128	7.916	0.881	14.6	-11.9
182	2335	2.138	34.738	2403.	2317.	*	585.8	34.2	2284.8	78.8	7.985	33.2	2288.5	73.3	12.839	7.891	0.767	8.7	-18.6
183	2584	1.941	34.735	2485.	2314.	*	565.8	33.8	2199.7	81.3	8.882	31.9	2284.7	77.3	12.636	7.898	0.787	9.8	-28.1
184	2831	1.768	34.734	2486.	2313.	*	553.9	32.6	2198.1	82.4	8.889	31.4	2283.6	78.8	12.712	7.896	0.794	5.8	-23.1
185	3879	1.639	34.726	2489.	2318.	*	528.7	31.3	2193.3	85.5	8.828	30.8	2199.4	88.6	12.454	7.985	0.828	5.5	-24.3
186	3326	1.493	34.723	2487.	2311.	*	536.3	31.9	2195.3	83.8	8.821	30.5	2281.8	78.6	12.948	7.888	0.888	8.6	-38.1
187	3577	1.338	34.718	2483.	2388.	*	527.5	31.6	2198.2	84.2	8.826	30.1	2197.3	78.6	13.695	7.883	0.888	-2.7	-34.4
188	3824	1.239	34.716	2483.	2295.	*	486.3	29.2	2175.9	89.9	8.858	27.7	2183.6	83.7	12.431	7.986	0.851	-8.9	-33.5
189	4874	1.182	34.716	2481.	2291.	*	478.8	28.8	2171.3	96.9	8.865	27.2	2179.6	84.2	12.538	7.982	0.857	-3.8	-37.3
118	4324	1.158	34.714	2396.	2292.	*	497.8	29.9	2174.4	87.7	8.848	28.3	2183.8	88.7	13.342	7.875	0.822	-18.9	-43.3
111	4571	1.162	34.714	2395.	2285.	*	475.9	28.7	2165.5	98.8	8.865	27.8	2174.8	83.3	13.111	7.862	0.847	-12.8	-47.5
112	4818	1.181	34.714	2394.	2282.	*	465.4	28.2	2161.9	91.8	8.871	26.5	2171.7	83.8	13.245	7.878	0.853	-15.2	-51.6
116	5868	1.289	34.714	2394.	2288.	*	489.7	29.4	2169.9	88.6	8.854	27.5	2188.1	88.4	14.183	7.851	0.818	-22.6	-68.1
115	5869	1.299	34.714	2398.	2292.	*	498.9	29.5	2173.8	88.7	8.854	27.6	2183.9	88.5	14.113	7.858	0.819	-22.5	-68.8
118	5136	1.216	34.715	2392.	2287.	*	492.9	29.6	2169.3	88.1	8.851	27.7	2179.5	79.8	14.291	7.845	0.812	-24.3	-62.1
128	5181	1.221	34.713	2393.	2285.	*	483.3	29.8	2166.3	89.7	8.859	27.1	2176.6	81.2	14.878	7.851	0.827	-23.6	-61.6
122	5213	1.225	34.714	2394.	2279.	*	468.8	27.6	2158.8	93.4	8.879	25.8	2168.6	84.6	13.472	7.871	0.861	-28.7	-58.9
124	5238	1.227	34.713	2393.	2282.	*	473.5	28.4	2162.2	91.3	8.867	26.5	2172.8	82.7	13.872	7.858	0.841	-22.9	-61.1

CARBONATE REPORT

STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
441	1	28 3 78	8158	5 1.7 S	91 46.8 E	4942
441	3	28 3 78	1814	5 2.5 S	91 43.9 E	4956

GC CO2 VALUES ARE NOT USED FOR COMPUTATION TCO2* = TCO2-15 (UM/KG)

MEASURED PARAMETERS						*CALC PARAMETERS P=1ATH,T=INSITU*						CALC. PARAMETERS P,T=INSITU							
SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/88)	TALK (EO/KG)	TIT TCO2* (M/KG)	GC TCO2 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH	ICP	DELTA CO3= (M/KG)	DELTA CO3= (ARRG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)
381	14	29.438	34.295	2248.	1893.	*	342.8	8.8	1633.8	258.4	8.255	6.8	1633.9	258.4	5.559	6.233	2.517	285.2	184.9
382	78	24.867	35.341	2317.	2837.	*	447.6	12.7	1823.6	288.6	8.155	12.7	1823.8	288.5	7.839	8.153	2.877	154.8	134.4
383	108	21.473	35.174	2369.	2183.	*	569.4	17.7	1933.1	152.2	8.855	17.7	1933.3	152.8	8.682	8.851	1.567	186.6	85.3
384	166	13.993	34.881	2387.	2178.	*	668.4	25.5	2649.5	183.8	7.972	25.5	2849.8	182.7	18.825	7.966	1.848	55.9	35.8
385	281	12.549	34.942	2313.	2264.	*	719.7	29.1	2883.4	91.5	7.933	29.8	2883.7	91.2	11.882	7.925	8.935	44.1	23.1
386	251	11.674	34.989	2318.	2194.	*	626.1	26.1	2868.6	99.3	7.983	26.8	2869.1	98.9	18.615	7.974	1.814	51.4	38.2
387	382	11.868	34.981	2314.	2211.	*	788.2	38.8	2893.2	87.8	7.933	29.9	2893.8	87.3	11.982	7.971	8.895	39.4	18.2
388	482	9.977	34.984	2318.	2227.	*	739.6	32.5	2113.3	61.2	7.912	32.3	2114.8	98.7	12.682	7.897	8.825	32.8	18.5
389	584	9.119	34.972	2326.	2248.	*	798.7	35.8	2137.5	74.7	7.883	35.5	2138.4	74.8	13.683	7.864	8.757	24.6	2.8
318	684	6.433	34.865	2333.	2258.	*	789.6	36.5	2148.3	73.2	7.882	36.3	2149.4	72.3	13.845	7.859	8.739	22.1	8.8
311	784	7.759	34.868	2345.	2284.	*	862.4	48.8	2176.4	66.8	7.845	48.5	2177.6	65.9	15.285	7.818	8.673	14.8	-7.5
312	882	7.155	34.854	2355.	2294.	*	846.6	48.9	2186.6	66.9	7.852	48.6	2187.6	65.8	15.112	7.821	8.673	14.8	-3.7
313	897	6.694	34.844	2359.	2388.	*	645.6	41.6	2192.5	65.9	7.851	41.1	2194.1	64.7	15.277	7.816	8.661	12.1	-16.8
314	995	6.888	34.813	2378.	2318.	*	823.8	41.4	2282.1	66.5	7.861	48.9	2283.9	65.2	15.871	7.822	8.665	11.7	-11.5
315	1894	5.687	34.889	2374.	2313.	*	887.8	41.1	2284.9	67.8	7.868	48.6	2286.9	65.5	14.956	7.825	8.669	11.2	-12.3
316	1195	5.288	34.885	2373.	2315.	*	886.8	41.3	2267.3	66.4	7.878	48.8	2289.4	64.8	15.838	7.823	8.661	9.5	-14.2
317	1256	4.825	34.794	2385.	2313.	*	726.6	37.8	2283.1	72.6	7.912	37.3	2285.5	76.2	13.763	7.861	6.716	14.8	-18.8
318	1394	4.416	34.792	2398.	2322.	*	732.9	39.1	2212.8	78.2	7.985	36.4	2215.3	58.3	14.145	7.849	8.696	11.2	-13.2
319	1493	4.828	34.881	2389.	2323.	*	732.3	39.6	2214.3	69.1	7.983	38.9	2217.8	67.1	14.333	7.844	8.684	9.8	-15.6
320	1593	3.731	34.785	2393.	2322.	*	699.2	38.2	2212.3	71.5	7.921	37.5	2215.2	69.3	13.868	7.858	8.787	16.3	-14.6
321	1693	3.391	34.777	2397.	2321.	*	665.4	36.8	2218.2	74.8	7.941	36.1	2213.4	71.5	13.393	7.873	8.729	11.5	-13.7
322	1787	3.168	34.777	2398.	2388.	*	595.2	33.2	2194.8	86.6	7.985	32.5	2197.4	78.1	12.197	7.914	8.796	17.2	-8.3
323	1883	2.923	34.767	2481.	2326.	*	536.8	35.5	2288.1	76.4	7.961	34.7	2211.7	73.6	13.889	7.886	8.756	11.7	-14.1
324	1983	2.677	34.768	2486.	2389.	*	557.5	31.7	2192.8	84.5	8.818	38.9	2196.7	81.4	11.787	7.932	8.829	18.5	-7.7
181	1991	2.712	34.759	2481.	2317.	*	611.5	34.7	2284.5	77.6	7.972	33.9	2288.3	74.8	12.792	7.893	8.763	11.8	-14.3
182	2189	2.395	34.756	2486.	2326.	*	596.9	34.3	2286.8	78.9	7.982	33.4	2211.1	75.6	12.756	7.894	8.778	18.5	-16.3
183	2389	2.126	34.743	2487.	2318.	*	546.8	31.7	2193.9	84.5	8.816	38.7	2198.6	88.7	11.987	7.921	8.822	13.5	-13.9
184	2586	1.962	34.733	2412.	2318.	*	555.7	32.5	2282.6	83.8	8.818	31.4	2287.6	79.8	12.486	7.986	8.884	9.6	-18.5
185	2786	1.631	34.735	2412.	2318.	*	521.8	36.6	2192.3	87.8	8.834	29.5	2197.9	82.6	11.931	7.923	8.841	11.8	-17.8
186	2983	1.714	34.731	2416.	2316.	*	499.7	29.5	2196.2	98.3	8.852	28.3	2196.3	85.4	11.659	7.933	8.878	11.5	-17.9
187	3229	1.559	34.726	2413.	2311.	*	516.8	36.6	2193.3	87.1	8.837	29.4	2199.8	81.9	12.332	7.988	8.834	5.8	-25.3
188	3471	1.398	34.728	2417.	2311.	*	588.5	29.9	2191.9	89.3	8.856	28.5	2198.9	83.6	12.267	7.911	8.851	3.7	-27.6
189	3714	1.261	34.717	2486.	2388.	*	494.7	29.7	2161.3	89.6	8.852	28.2	2188.8	82.9	12.485	7.964	8.844	-8.2	-32.3
118	3952	1.167	34.713	2486.	2293.	*	469.6	28.3	2172.6	92.7	8.872	26.8	2188.1	66.1	12.178	7.915	8.876	-8.3	-33.3
111	4285	1.154	34.713	2483.	2298.	*	495.7	29.9	2179.7	86.4	8.858	28.2	2188.1	81.6	13.126	7.882	8.831	-8.3	-42.3
112	4453	1.162	34.715	2398.	2282.	*	457.5	27.5	2168.4	94.1	8.881	25.9	2169.5	86.6	12.484	7.984	8.881	-6.9	-41.9
115	4693	1.184	34.713	2397.	2286.	*	474.8	28.5	2166.8	91.4	8.867	26.8	2175.5	83.7	13.197	7.888	8.851	-13.4	-49.4
116	4697	1.184	34.714	2396.	2291.	*	493.9	29.7	2173.1	88.2	8.851	27.9	2162.4	86.6	13.728	7.862	8.828	-16.5	-52.5
117	4737	1.186	34.713	2397.	2296.	*	487.4	29.3	2171.4	89.3	8.856	27.5	2188.9	81.6	13.681	7.866	8.838	-16.2	-52.3
128	4835	1.195	34.714	2397.	2292.	*	494.4	29.7	2174.8	88.2	8.851	27.9	2183.7	86.4	13.989	7.857	8.818	-18.8	-55.4
121	4865	1.199	34.713	2397.	2292.	*	494.2	29.7	2174.1	88.2	8.851	27.9	2183.8	88.3	13.943	7.856	8.817	-19.4	-56.1
124	4922	1.285	34.714	2396.	2294.	*	584.7	38.3	2177.8	86.6	8.842	28.5	2186.8	78.8	14.381	7.845	8.881	-21.9	-58.8

CARBONATE REPORT

GEOSSECS	INDIAN	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	30T DEPTH
		442	1	22 3 78	0142	1 12.1 S	98 45.3 E	4619
		442	4	22 3 78	0952	1 9.8 S	99 44.6 E	

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2*=TCO2-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (EQ/KG)	MEASURED PARAMETERS				CALC. PARAMETERS P=1ATH,T=INSITU*				CALC. PARAMETERS P.T=INSITU			DELTA CO3= (M/KG)	DELTA CO3= (ARRG)	DELTA CO3= (M/KG)			
					TIT (E-6)	GC TCO2* (M/KG)	TCO2 (M/KG)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)				PH	PH	ICP (E-6)
461	20	29.682	33.731	2213.	1857.	*	*	326.9	8.3	1998.8	258.7	8.278	*	8.3	1998.8	258.6	5.383	8.269	2.478	285.5	185.3
462	51	29.118	34.434	2257.	1981.	*	*	341.5	8.8	1641.8	231.2	8.256	*	8.8	1641.2	231.8	5.568	8.255	2.534	285.7	185.3
463	89	23.143	35.183	2383.	2066.	*	*	513.4	15.3	1878.5	172.2	8.898	*	15.3	1878.7	172.1	8.833	8.895	1.775	126.2	165.7
464	100	28.671	35.181	2383.	2111.	*	*	593.7	18.9	1949.1	143.8	8.833	*	18.8	1949.3	142.8	9.293	8.832	1.473	96.8	76.1
465	139	15.756	35.129	2388.	2179.	*	*	717.8	26.2	2849.8	183.8	7.945	*	26.2	2849.2	183.6	11.468	7.941	1.867	57.1	36.2
486	169	14.922	35.121	2387.	2183.	*	*	715.9	26.9	2855.5	188.6	7.943	*	26.8	2855.9	188.3	11.575	7.936	1.833	53.6	32.7
487	210	13.958	35.125	2314.	2183.	*	*	659.3	25.5	2853.4	184.2	7.972	*	25.4	2853.8	183.8	10.852	7.964	1.869	56.7	35.7
488	259	12.747	35.189	2314.	2196.	*	*	805.8	27.5	2872.1	96.4	7.952	*	27.4	2872.5	96.1	11.486	7.943	0.389	48.6	27.4
489	387	12.198	35.885	2315.	2198.	*	*	674.6	27.5	2874.7	95.7	7.956	*	27.4	2875.3	95.2	11.347	7.945	0.879	47.4	26.1
410	411	10.644	35.828	2316.	2229.	*	*	784.8	33.7	2115.9	79.5	7.891	*	33.5	2116.6	78.9	13.328	7.875	0.818	38.2	8.7
411	508	10.892	34.986	2328.	2226.	*	*	729.8	31.9	2111.2	82.9	7.918	*	31.7	2112.1	82.2	12.629	7.899	0.843	32.8	11.8
412	610	9.198	34.933	2328.	2245.	*	*	766.8	34.5	2133.3	77.2	7.896	*	34.3	2134.3	76.4	13.398	7.873	0.782	26.1	4.1
415	785	8.722	35.882	2337.	2268.	*	*	841.8	38.5	2198.9	78.5	7.858	*	38.2	2188.2	69.6	14.762	7.831	0.714	18.7	-3.6
416	883	8.112	34.988	2358.	2287.	*	*	865.6	48.5	2178.6	67.9	7.846	*	48.1	2188.8	66.9	15.318	7.815	0.686	15.1	-7.5
417	982	7.422	34.932	2354.	2388.	*	*	984.1	43.3	2193.8	63.7	7.826	*	42.9	2194.5	62.6	16.198	7.791	0.641	18.8	-12.8
418	1083	6.819	34.946	2383.	2382.	*	*	839.5	41.8	2194.1	66.8	7.855	*	48.6	2195.9	65.5	15.283	7.816	0.671	12.1	-11.1
419	1183	6.318	34.917	2369.	2388.	*	*	826.6	41.1	2199.9	67.8	7.868	*	48.6	2201.8	65.5	15.244	7.817	0.671	11.2	-12.2
428	1282	5.891	34.897	2373.	2314.	*	*	825.9	41.7	2286.3	66.8	7.853	*	41.2	2288.4	64.4	15.416	7.812	0.659	9.2	-14.5
421	1351	4.957	34.864	2381.	2314.	*	*	751.9	39.3	2285.1	69.6	7.895	*	38.7	2287.5	67.8	14.487	7.841	0.693	11.1	-13.8
422	1499	4.118	34.828	2388.	2318.	*	*	713.4	38.4	2288.5	71.8	7.914	*	37.8	2211.3	69.8	13.989	7.854	0.784	18.9	-13.8
423	1658	3.698	34.812	2392.	2318.	*	*	682.8	37.3	2287.7	72.9	7.931	*	36.6	2218.8	78.6	13.637	7.865	0.728	11.1	-14.8
181	1793	3.236	34.797	2399.	2321.	*	*	652.4	36.3	2289.8	74.9	7.948	*	35.5	2213.2	72.3	13.282	7.877	0.738	11.4	-14.2
424	1798	3.176	34.796	2398.	2325.	*	*	676.2	37.7	2214.7	72.6	7.933	*	36.9	2218.1	78.8	13.759	7.861	0.714	9.8	-16.6
182	1989	2.698	34.776	2484.	2321.	*	*	616.9	35.8	2288.6	77.4	7.969	*	34.2	2212.4	74.4	12.986	7.898	0.759	11.5	-14.7
183	2187	2.362	34.762	2488.	2319.	*	*	584.6	33.6	2284.9	88.5	7.998	*	32.7	2289.2	77.2	12.583	7.983	0.786	12.1	-14.7
184	2385	2.133	34.754	2412.	2322.	*	*	576.1	33.4	2287.6	81.8	7.996	*	32.4	2212.2	77.4	12.572	7.981	0.798	10.2	-17.2
185	2584	1.948	34.745	2412.	2316.	*	*	547.6	32.8	2288.8	84.8	8.015	*	38.9	2285.1	88.8	12.238	7.912	0.815	18.6	-17.5
186	2783	1.824	34.748	2412.	2323.	*	*	573.4	33.7	2288.9	88.5	7.996	*	32.5	2214.3	76.2	13.833	7.885	0.776	4.7	-24.1
187	2982	1.783	34.737	2416.	2313.	*	*	516.6	38.5	2194.9	87.6	8.838	*	29.3	2288.9	82.8	12.836	7.928	0.843	8.9	-20.5
188	3227	1.614	34.738	2418.	2318.	*	*	527.1	31.2	2288.6	86.2	8.838	*	29.9	2287.1	81.1	12.549	7.981	0.825	4.2	-26.1
189	3475	1.428	34.725	2413.	2311.	*	*	514.3	38.7	2193.3	87.1	8.838	*	29.3	2288.2	81.5	12.682	7.988	0.838	1.5	-29.7
110	3723	1.187	34.721	2484.	2299.	*	*	496.5	29.9	2188.7	88.4	8.858	*	28.4	2188.2	82.4	12.558	7.981	0.839	-0.9	-33.1
111	3973	1.152	34.718	2481.	2289.	*	*	478.6	28.3	2168.7	91.9	8.871	*	26.9	2176.8	85.3	12.244	7.912	0.868	-1.3	-34.5
112	4218	1.139	34.718	2481.	2285.	*	*	497.9	27.6	2163.3	94.1	8.881	*	26.8	2172.8	87.8	12.218	7.913	0.885	-3.1	-37.2
115	4451	1.169	34.718	2399.	2286.	*	*	467.2	28.1	2165.4	92.5	8.873	*	26.5	2174.5	85.8	12.721	7.895	0.865	-8.4	-43.4
116	4451	1.159	34.719	2396.	2296.	*	*	476.3	23.7	2166.5	98.9	8.865	*	27.8	2175.5	83.4	12.967	7.887	0.849	-10.8	-45.8
117	4477	1.170	34.717	2397.	2288.	*	*	488.7	28.9	2168.6	98.4	8.852	*	27.3	2177.7	83.1	13.188	7.882	0.845	-18.8	-45.9
119	4531	1.171	34.719	2397.	2298.	*	*	479.9	28.9	2168.9	98.3	8.862	*	27.2	2177.9	82.9	13.113	7.882	0.843	-11.3	-46.5
121	4551	1.174	34.718	2399.	2287.	*	*	493.8	29.1	2163.2	99.8	8.859	*	27.4	2177.3	82.3	13.269	7.877	0.838	-12.6	-48.8
124	4600	1.188	34.717	2394.	2291.	*	*	508.6	38.1	2173.7	87.2	8.945	*	28.4	2182.9	79.8	13.739	7.858	0.812	-15.9	-51.5

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 443 1 23 3 79 1303 8 1.5 N 90 20.5 E 4540

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2**=TCO2-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (00/KG)	MEASURED PARAMETERS		*CALC PARAMETERS P=1ATM, T=INSITU*								CALC. PARAMETERS P, T=INSITU				DELTA CO3= (M/KG)	DELTA CO3= (ARAG) (M/KG)	
					TIT (E-5)	GC (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	AH (E-9)	PH	ICP (E-5)				
115	799	9.152	34.991	2349.	2207.	*	*	072.9	40.8	2178.8	67.4	7.843	*	40.4	2180.2	66.4	15.432	7.812	8.681	14.7	-7.9
124	3734	1.10	34.719	2402.	2304.	*	*	521.3	31.4	2107.9	34.8	8.030	*	29.3	2195.2	70.9	13.172	7.000	8.803	-4.6	-36.8

GEOSOFF INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 444 2 24 3 79 0627 8 35.2 N 68 30.3 E 4464

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS					*CALC PARAMETERS P=1ATH,T=INSITU*					CALC. PARAMETERS P.T=INSITU					DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP (C)	SAL (8/100)	TALK (EQ/KG)	TIT (M/KG)	* GC (M/KG)	* TC02 (M/KG)	* PC02 (ATM)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	* H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	PH	ICP (M/KG)	DELTA CO3= (CALC)	DELTA CO3= (ARRG)
				(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)		(E-6)	(E-6)	(E-6)
201	2286	2.264	34.753	2411.	2313.	*	*	545.1	31.5	2156.4	85.1	8.818	30.6	2208.9	81.5	11.826	7.927	8.838	15.4	-11.8
202	2435	2.87	34.747	2412.	2322.	*	*	574.6	33.4	2207.6	81.8	7.997	32.4	2212.3	77.3	12.688	7.999	8.797	9.6	-18.8
203	2505	1.95	34.745	2412.	2319.	*	*	559.6	32.7	2203.8	82.5	8.867	31.6	2208.9	78.5	12.488	7.984	8.799	9.1	-19.8
204	2735	1.82	34.736	2414.	2318.	*	*	545.5	32.8	2201.9	84.8	8.817	38.9	2207.3	79.8	12.371	7.988	8.812	8.7	-19.9
205	2884	1.757	34.734	2416.	2314.	*	*	522.8	38.7	2156.1	87.2	8.834	29.6	2201.9	82.6	12.838	7.919	8.841	9.8	-19.3
208	3834	1.66	34.732	2418.	2317.	*	*	524.6	31.8	2199.3	86.7	8.832	29.8	2205.3	81.9	12.265	7.911	8.934	7.4	-22.3
207	3233	1.55	34.729	2417.	2328.	*	*	536.9	31.9	2203.5	84.6	8.822	38.5	2209.9	79.5	12.798	7.893	8.818	2.6	-27.8
209	3333	1.51	34.726	2419.	2314.	*	*	587.8	38.1	2195.1	88.8	8.845	28.8	2201.8	83.4	12.225	7.913	8.849	5.2	-25.5
209	3532	1.482	34.724	2419.	2309.	*	*	487.9	29.1	2188.4	91.5	8.868	27.7	2195.6	85.6	12.835	7.928	8.872	4.9	-26.5
210	3732	1.36	34.721	2422.	2386.	*	*	467.7	27.3	2183.4	94.7	8.877	28.5	2191.1	88.4	11.776	7.929	8.899	5.8	-27.1
211	3931	1.38	34.728	2419.	2312.	*	*	497.1	29.7	2192.5	89.8	8.853	28.2	2208.5	83.4	12.789	7.896	8.848	-2.6	-35.5
212	4131	1.481	34.719	2424.	2312.	*	*	482.1	28.8	2198.6	92.6	8.866	27.2	2199.1	85.7	12.552	7.981	8.872	-3.8	-36.7
215	4277	1.418	34.728	2424.	2321.	*	*	513.5	38.6	2202.5	87.8	8.841	28.9	2211.1	88.9	13.493	7.878	8.824	-9.8	-44.8
216	4273	1.418	34.728	2423.	2316.	*	*	498.9	29.8	2196.3	89.9	8.852	28.1	2205.8	82.9	13.141	7.881	8.844	-7.9	-42.1
217	4381	1.411	34.719	2423.	2311.	*	*	482.8	28.7	2189.7	92.6	8.866	27.1	2198.5	85.4	12.751	7.894	8.869	-5.7	-48.8
221	4399	1.418	34.718	2422.	2314.	*	*	495.4	29.5	2194.8	98.4	8.855	27.9	2202.9	83.2	13.286	7.879	8.847	-9.3	-44.8
222	4424	1.421	34.718	2424.	2317.	*	*	499.9	29.8	2197.2	98.8	8.852	28.1	2206.1	82.8	13.348	7.875	8.842	-18.1	-44.9
224	4449	1.424	34.717	2422.	2383.	*	*	459.4	27.4	2179.3	96.3	8.885	25.8	2188.5	88.7	12.362	7.988	8.983	-4.5	-39.4

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE SOT DEPTH
 445 1 26 3 78 1488 9 31.4 N 96 2.5 E 3639
 445 3 26 3 78 2823 9 33.3 N 96 3.1 E 3639

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS					CALC. PARAMETERS P=1ATM, T=INSITU					CALC. PARAMETERS P, T=INSITU											
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (EQ/KG)	TIT (M/KG)	GC TC02 (M/KG)	TC02 (M/KG)	PCO2 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	AM (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3= (ARRAG) (M/KG)	
381	19	29.888	34.225	2252.	1894.	*	*	334.3	8.6	1632.7	252.7	9.264	*	8.6	1632.7	252.6	5.453	8.263	2.535	287.5	187.1
382	59	25.728	34.285	2256.	1984.	*	*	445.8	12.5	1776.3	195.3	8.154	*	12.5	1776.4	195.2	7.849	8.152	1.961	149.6	129.1
383	98	21.411	34.889	2285.	2125.	*	*	725.5	22.6	1978.2	124.2	7.968	*	22.6	1978.3	124.8	11.831	7.957	1.256	78.1	97.5
384	125	17.719	34.867	2295.	2183.	*	*	859.7	29.7	2057.9	95.3	7.881	*	29.7	2058.2	95.2	13.286	7.877	8.973	48.8	28.1
385	139	16.583	34.877	2297.	2198.	*	*	852.4	38.5	2067.3	92.2	7.888	*	38.4	2067.5	92.8	13.341	7.875	8.941	45.5	24.7
386	159	15.347	34.924	2303.	2212.	*	*	912.9	33.9	2094.7	83.4	7.848	*	33.8	2095.8	83.2	14.373	7.842	8.852	36.5	15.7
387	179	14.898	34.951	2310.	2235.	*	*	981.3	37.0	2122.1	75.1	7.815	*	37.7	2122.4	74.8	15.547	7.888	8.767	28.8	7.8
388	208	13.348	34.986	2312.	2236.	*	*	946.4	37.3	2123.5	75.2	7.826	*	37.2	2123.8	75.0	15.172	7.819	8.769	27.9	6.9
389	248	12.214	35.016	2322.	2251.	*	*	945.2	38.6	2139.8	72.6	7.824	*	38.5	2140.2	72.3	15.326	7.815	8.742	24.9	3.8
310	288	11.558	35.046	2321.	2257.	*	*	978.2	48.5	2147.6	68.9	7.818	*	48.3	2148.1	68.6	15.874	7.799	8.784	20.9	-8.4
311	328	11.821	35.835	2326.	2255.	*	*	931.5	39.5	2149.2	78.3	7.825	*	39.4	2149.7	69.9	15.393	7.813	8.718	21.9	8.5
312	381	18.568	35.834	2328.	2268.	*	*	965.5	41.6	2159.5	66.9	7.889	*	41.4	2168.2	66.4	16.866	7.794	8.682	18.8	-3.5
313	446	18.831	35.824	2336.	2276.	*	*	945.9	41.6	2167.4	66.5	7.814	*	41.4	2168.2	66.4	15.952	7.797	8.681	17.4	-4.2
314	545	9.392	35.811	2339.	2288.	*	*	935.8	41.9	2171.8	66.4	7.818	*	41.6	2172.7	65.7	15.945	7.797	8.674	15.9	-5.9
316	745	7.986	34.978	2355.	2382.	*	*	932.7	43.8	2154.7	63.5	7.816	*	43.4	2196.8	62.6	16.332	7.787	8.642	11.2	-11.2
317	844	7.414	34.961	2362.	2313.	*	*	943.8	45.2	2206.8	61.8	7.818	*	44.8	2287.5	68.7	16.728	7.777	8.622	8.6	-14.1
318	943	6.865	34.948	2368.	2312.	*	*	877.4	42.8	2284.4	64.8	7.838	*	42.4	2286.8	63.6	15.984	7.801	8.652	18.6	-12.4
319	1841	6.419	34.927	2372.	2322.	*	*	984.7	44.9	2215.8	62.2	7.825	*	44.4	2216.8	68.9	16.467	7.783	8.623	7.8	-16.2
320	1134	5.948	34.986	2379.	2321.	*	*	837.4	42.2	2213.8	65.7	7.855	*	41.7	2215.8	64.3	15.478	7.818	8.658	9.6	-13.9
321	1230	5.489	34.859	2383.	2325.	*	*	823.8	42.2	2217.1	65.7	7.858	*	41.7	2219.3	64.1	15.426	7.812	8.656	8.6	-15.2
322	1328	5.815	34.873	2387.	2329.	*	*	818.9	42.3	2221.8	65.8	7.866	*	41.7	2223.3	64.8	15.391	7.813	8.654	7.6	-16.5
323	1425	4.586	34.854	2392.	2334.	*	*	798.5	42.3	2226.8	65.7	7.871	*	41.6	2228.5	63.8	15.345	7.814	8.652	6.5	-17.9
181	1497	4.363	34.843	2398.	2338.	*	*	735.4	39.3	2228.4	78.4	7.984	*	38.6	2223.1	68.3	14.293	7.845	8.698	18.3	-14.3
324	1525	4.174	34.839	2396.	2334.	*	*	763.6	41.1	2225.4	67.6	7.888	*	40.3	2228.1	65.5	14.892	7.827	8.669	7.2	-17.5
182	1643	3.742	34.821	2402.	2332.	*	*	788.4	38.7	2222.8	71.3	7.917	*	37.5	2225.8	69.8	14.868	7.852	8.784	9.5	-15.5
183	1792	3.166	34.799	2413.	2338.	*	*	631.6	35.2	2217.1	77.6	7.963	*	34.5	2228.5	75.8	12.822	7.892	8.765	14.8	-11.5
184	1943	2.888	34.792	2414.	2333.	*	*	632.3	35.8	2228.6	76.7	7.981	*	34.9	2224.3	73.8	13.862	7.884	8.753	11.3	-14.7
185	2898	2.545	34.771	2418.	2333.	*	*	689.5	34.8	2219.5	78.7	7.976	*	33.9	2223.5	73.6	12.888	7.893	8.771	11.6	-14.9
186	2248	2.314	34.755	2421.	2338.	*	*	613.5	35.3	2224.5	77.7	7.573	*	34.4	2229.2	74.4	13.883	7.883	8.758	8.8	-18.2
187	2388	2.145	34.751	2424.	2341.	*	*	618.7	35.4	2227.8	77.8	7.974	*	34.4	2232.4	74.3	13.218	7.879	8.757	7.1	-28.4
188	2535	1.998	34.746	2428.	2338.	*	*	586.2	34.2	2223.5	88.3	7.991	*	33.1	2228.4	76.5	12.984	7.889	8.779	7.7	-28.3
189	2685	1.877	34.741	2426.	2328.	*	*	542.8	31.8	2218.8	85.4	8.021	*	38.7	2216.2	81.1	12.192	7.914	8.826	18.7	-17.8
110	2927	1.735	34.734	2429.	2337.	*	*	564.5	33.3	2221.4	82.4	8.085	*	32.8	2227.1	77.9	12.939	7.888	8.793	4.6	-24.7
111	3875	1.545	34.738	2438.	2325.	*	*	581.4	29.6	2288.8	51.4	8.854	*	28.4	2214.2	86.3	11.712	7.931	8.879	11.3	-18.5
112	3224	1.565	34.729	2436.	2325.	*	*	586.8	38.8	2288.7	98.3	8.849	*	28.7	2215.3	85.8	11.996	7.921	8.865	8.2	-22.2
114	3374	1.492	34.727	2437.	2333.	*	*	515.6	38.7	2213.7	88.7	8.842	*	29.3	2228.5	83.2	12.382	7.987	8.947	4.5	-26.3
115	3538	1.435	34.724	2441.	2341.	*	*	538.7	31.6	2222.6	86.7	8.831	*	38.2	2229.7	81.1	12.985	7.989	8.825	8.3	-31.1
117	3552	1.432	34.723	2447.	2345.	*	*	525.1	31.3	2225.9	87.9	8.836	*	29.8	2232.9	82.2	12.763	7.894	8.837	1.3	-38.2
119	3572	1.428	34.722	2453.	2347.	*	*	512.2	38.5	2226.3	98.2	8.847	*	29.1	2233.6	84.3	12.463	7.984	8.858	3.1	-28.5
121	3683	1.428	34.722	2453.	2347.	*	*	512.2	38.5	2226.3	98.2	8.847	*	29.1	2233.7	84.3	12.499	7.983	8.858	2.7	-29.8
124	3639	1.438	34.723	2454.	2345.	*	*	581.8	29.5	2223.3	91.8	8.855	*	28.5	2238.8	85.7	12.297	7.918	8.873	3.7	-28.2

114

CARBONATE REPORT

GEOSECS	INDIAN	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
		446	2	29	3 78	0600	12 29.9 N	34 29.4 E
		446	4	29	3 78	1214	12 25.2 N	84 28.3 E
		446	7	28	3 78	2218	12 23.6 N	84 27.2 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-15 (UM/KG)

MEASURED PARAMETERS										CALC. PARAMETERS P=1ATH.T=INSITU*										CALC. PARAMETERS P.T=(INSITU)			
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (8/100)	TALK (M/KG)	TC02* (E-6)	TC02** (E-6)	GC (E-6)	PC02 (M/KG)	N2CO3 (E-6)	NC03- (E-6)	CO3= (M/KG)	PH	N2CO3 (E-6)	NC03- (E-6)	CO3= (E-6)	AM (E-9)	PH	ICP (E-6)	DELTA CO3= (M/KG)	DELTA CO3- (M/KG)			
481	9	28.113	33.258	2219.	1872.	*	*	* 318.2	8.4	1618.8	245.5	8.270	* 8.4	1618.8	245.5	5.277	8.278	2.393	200.5	180.2			
482	38	27.953	33.648	2229.	1882.	*	*	* 323.3	8.6	1628.2	245.2	8.272	* 8.6	1628.3	245.1	5.366	8.278	2.417	199.9	179.5			
483	68	27.268	34.836	2244.	1920.	*	*	* 355.9	9.7	1680.7	225.6	8.233	* 9.7	1680.9	229.5	5.879	8.231	2.289	183.9	163.5			
484	89	27.473	34.803	2288.	1968.	*	*	* 406.1	10.9	1735.3	221.8	8.194	* 10.8	1735.5	221.6	6.441	8.191	2.261	176.8	155.5			
485	108	27.472	35.869	2296.	1972.	*	*	* 393.8	10.5	1731.5	230.8	8.287	* 10.5	1731.7	229.8	6.261	8.283	2.362	184.1	163.6			
486	186	27.157	34.994	2291.	1988.	*	*	* 425.9	11.5	1768.4	216.1	8.177	* 11.4	1768.7	215.9	6.706	8.174	2.214	170.1	149.6			
487	117	25.851	34.738	2275.	2053.	*	*	* 508.8	16.5	1873.2	163.3	8.056	* 16.5	1873.4	163.1	8.958	8.853	1.668	117.2	96.6			
488	127	32.373	34.704	2275.	2119.	*	*	* 765.6	23.3	1973.6	122.1	7.942	* 23.3	1973.9	121.9	11.533	7.938	1.248	75.8	55.1			
489	137	28.386	34.823	2283.	2151.	*	*	* 828.1	25.6	2016.9	187.4	7.985	* 25.6	2017.2	187.2	12.595	7.980	1.095	68.9	48.2			
410	147	19.160	34.858	2267.	2164.	*	*	* 842.6	28.8	2034.1	182.8	7.894	* 27.9	2034.3	181.7	12.928	7.888	1.048	55.3	34.6			
411	156	18.632	34.846	2298.	2172.	*	*	* 853.1	28.8	2044.3	98.9	7.887	* 28.7	2044.6	98.7	13.133	7.882	1.088	52.2	31.4			
412	179	17.832	34.882	2298.	2206.	*	*	* 965.1	34.1	2087.4	84.6	7.833	* 34.8	2087.7	84.3	14.916	7.826	1.362	37.6	16.8			
413	195	15.191	34.926	2304.	2227.	*	*	* 1886.8	37.5	2113.1	76.4	7.809	* 37.4	2113.4	76.2	15.785	7.802	0.788	29.3	8.3			
414	236	12.998	34.986	2316.	2246.	*	*	* 978.9	39.8	2134.7	72.3	7.812	* 38.9	2135.1	72.8	15.733	7.803	0.739	24.7	3.6			
415	275	12.188	35.810	2318.	2257.	*	*	* 1813.3	41.5	2147.7	67.8	7.794	* 41.4	2148.1	67.5	16.447	7.784	0.692	19.8	-1.4			
416	316	11.248	35.826	2325.	2275.	*	*	* 1871.1	45.1	2167.1	62.8	7.769	* 45.8	2167.6	62.4	17.588	7.757	0.641	14.4	-6.9			
417	357	10.844	35.824	2328.	2263.	*	*	* 939.7	48.1	2153.6	63.3	7.821	* 39.9	2154.2	68.9	15.984	7.807	0.787	28.6	-0.8			
418	396	10.471	35.829	2328.	2281.	*	*	* 1866.8	46.8	2173.7	61.3	7.768	* 45.9	2174.3	68.8	17.671	7.753	0.624	12.2	-9.3			
419	494	9.752	35.816	2314.	2288.	*	*	* 1215.1	53.8	2182.8	52.3	7.789	* 53.5	2182.8	51.7	20.452	7.685	0.538	2.3	-19.4			
420	621	8.878	35.888	2345.	2388.	*	*	* 1898.7	49.7	2201.4	56.9	7.754	* 49.4	2202.4	56.2	18.619	7.738	0.577	5.9	-16.2			
421	745	9.849	34.988	2353.	2387.	*	*	* 987.7	46.3	2288.2	68.6	7.793	* 45.9	2281.4	55.7	17.243	7.763	0.612	8.3	-14.1			
422	894	7.151	34.949	2366.	2311.	*	*	* 853.6	43.2	2283.4	64.4	7.832	* 42.8	2284.9	63.3	15.973	7.797	0.649	10.7	-12.1			
423	1848	6.353	34.928	2375.	2317.	*	*	* 825.2	41.8	2288.3	67.6	7.863	* 40.5	2218.2	56.3	15.867	7.822	0.678	12.4	-10.8			
424	1190	5.646	34.898	2381.	2325.	*	*	* 841.5	42.9	2217.3	64.8	7.852	* 42.3	2219.4	63.3	15.667	7.885	0.648	8.1	-15.6			
281	1191	5.373	34.891	2383.	2318.	*	*	* 782.9	48.8	2289.1	68.8	7.882	* 39.5	2211.5	67.3	14.637	7.935	0.688	12.1	-11.6			
283	1488	4.428	34.848	2396.	2335.	*	*	* 776.7	41.4	2226.5	67.1	7.882	* 48.7	2229.2	65.1	15.839	7.823	0.665	7.2	-17.4			
284	1648	3.679	34.819	2434.	2339.	*	*	* 734.3	48.2	2229.8	69.8	7.983	* 39.4	2232.8	66.7	14.538	7.938	0.681	7.3	-17.8			
285	1798	3.181	34.796	2412.	2334.	*	*	* 693.8	36.6	2222.2	75.2	7.945	* 35.8	2225.6	72.6	13.258	7.878	0.741	11.7	-13.9			
286	1937	2.746	34.779	2419.	2338.	*	*	* 533.3	35.9	2225.3	76.8	7.961	* 35.8	2229.8	74.8	13.858	7.884	0.754	11.5	-14.5			
287	2886	2.497	34.768	2421.	2337.	*	*	* 614.1	35.1	2223.5	78.3	7.973	* 34.2	2227.6	75.2	12.886	7.898	0.767	11.2	-15.3			
288	2235	2.294	34.759	2424.	2346.	*	*	* 637.9	36.8	2233.8	75.5	7.958	* 35.8	2238.8	72.2	13.554	7.968	0.736	6.6	-20.3			
289	2384	2.119	34.751	2431.	2354.	*	*	* 648.4	37.2	2241.7	75.1	7.956	* 36.1	2246.3	71.6	13.782	7.861	0.738	4.5	-23.8			
210	2534	1.985	34.745	2429.	2342.	*	*	* 551.4	34.5	2227.6	79.5	7.988	* 33.4	2232.5	76.1	12.997	7.886	0.775	7.3	-20.6			
211	2682	1.872	34.748	2438.	2348.	*	*	* 618.7	35.8	2234.8	77.4	7.974	* 34.6	2239.9	73.5	13.593	7.967	0.748	3.8	-25.4			
212	2929	1.717	34.734	2436.	2342.	*	*	* 558.1	32.9	2225.6	83.5	8.011	* 31.7	2231.4	75.8	12.778	7.894	0.884	5.7	-23.6			
214	3888	1.592	34.729	2435.	2335.	*	*	* 517.8	38.7	2215.6	88.7	8.041	* 29.4	2221.9	83.7	12.885	7.918	0.852	8.5	-21.6			
215	3184	1.584	34.727	2436.	2338.	*	*	* 538.1	32.8	2228.4	85.6	8.025	* 38.7	2226.8	88.5	12.668	7.897	0.928	4.2	-26.8			
217	3197	1.494	34.726	2435.	2341.	*	*	* 553.2	32.5	2224.6	83.5	8.013	* 31.5	2238.9	78.5	13.824	7.885	0.888	2.8	-28.2			
219	3224	1.469	34.725	2445.	2344.	*	*	* 528.2	31.4	2225.3	87.3	8.033	* 38.1	2231.8	82.1	12.454	7.985	0.836	5.2	-25.1			
221	3262	1.473	34.725	2458.	2348.	*	*	* 526.4	31.3	2229.7	88.8	8.036	* 38.8	2235.3	82.7	12.434	7.985	0.842	5.4	-25.1			
224	3384	1.477	34.725	2448.	2347.	*	*	* 529.4	31.5	2228.1	87.4	8.033	* 38.1	2234.8	82.1	12.557	7.981	0.835	4.2	-26.4			

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 447 1 5 4 79 2239 4 59.8 N 79 57.2 E 4198
 447 3 5 4 78 1848 4 56.5 N 79 53.7 E 4289

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02**=TC02-13 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P=1ATH, T=INSITU					CALC. PARAMETERS P, T=INSITU									
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TIT (E-6)	GC TC02** (M/KG)	TC02 (M/KG)	PC02 (ATH) (M/KG)	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HC03- (M/KG)	CO3= (M/KG)	PH	ICP (M/KG)	DELTA CO3= (M/KG)	DELTA CO3= (M/KG)	
381	2	29.993	33.917	2241.	1880.	*	346.9	8.8	1629.7	249.9	8.254	8.8	1629.7	249.9	5.974	8.254	2.481	284.5	184.3
382	2	29.993	33.913	2237.	1889.	*	347.1	8.8	1627.5	248.7	8.253	8.8	1627.5	248.7	5.986	8.253	2.473	283.7	183.5
383	5	29.439	34.297	2299.	1899.	*	343.4	8.8	1630.9	291.3	8.296	8.8	1630.9	291.3	5.948	8.256	2.526	286.2	185.9
384	46	29.585	39.288	2386.	1991.	*	398.7	9.3	1698.9	298.7	9.242	9.3	1691.0	298.6	5.744	8.241	2.986	285.3	185.8
389	89	21.828	34.819	2286.	2186.	*	631.8	19.5	1948.7	139.8	8.819	19.5	1948.9	139.7	9.718	8.812	1.426	93.8	73.2
386	122	17.889	34.858	2297.	2183.	*	827.1	29.1	2897.7	96.1	7.894	29.1	2897.9	96.8	12.993	7.898	0.988	49.6	28.9
387	148	14.421	34.979	2318.	2219.	*	883.6	33.7	2182.2	83.1	7.898	33.6	2182.5	82.9	14.833	7.993	0.898	36.2	15.4
388	197	12.828	39.882	2315.	2237.	*	916.8	36.7	2124.4	76.8	7.837	36.6	2124.7	79.7	14.787	7.838	0.778	28.6	7.6
389	247	11.967	33.188	2328.	2236.	*	849.4	34.9	2122.4	78.6	7.865	34.8	2122.9	78.3	13.946	7.856	0.886	38.9	9.7
389	297	11.998	35.897	2318.	2231.	*	817.4	34.8	2117.1	79.9	7.878	33.9	2117.6	79.5	13.988	7.867	0.818	31.7	18.4
311	327	11.278	39.881	2327.	2236.	*	786.3	33.1	2121.8	81.9	7.894	32.9	2121.6	81.4	13.127	7.882	0.838	33.4	12.1
312	399	18.914	35.873	2321.	2232.	*	784.8	33.4	2118.8	88.7	7.893	33.2	2118.6	88.1	13.289	7.879	0.824	31.9	18.5
313	427	18.968	39.894	2317.	2228.	*	771.3	33.2	2114.3	88.4	7.897	33.8	2115.1	79.8	13.155	7.881	0.828	31.1	9.5
314	499	18.123	39.859	2328.	2247.	*	889.1	39.3	2139.1	76.6	7.878	35.1	2136.8	75.9	13.836	7.859	0.788	26.6	4.8
319	599	9.481	39.878	2334.	2278.	*	997.7	42.7	2178.4	64.9	7.888	42.5	2171.4	64.1	16.485	7.785	0.639	14.8	-8.8
316	696	8.784	35.819	2344.	2298.	*	998.8	43.4	2182.6	64.8	7.818	43.1	2183.8	63.1	16.492	7.793	0.648	12.2	-18.8
317	795	8.866	34.983	2351.	2296.	*	919.8	43.8	2188.7	64.3	7.822	42.7	2198.8	63.3	16.191	7.791	0.649	11.6	-11.8
318	897	7.965	34.968	2361.	2386.	*	986.2	43.2	2198.4	64.4	7.827	42.8	2199.9	63.3	16.148	7.792	0.649	18.7	-12.1
319	996	6.932	34.949	2367.	2314.	*	988.6	43.9	2288.6	63.9	7.828	43.4	2288.3	62.3	16.273	7.789	0.638	8.9	-14.2
328	1094	6.322	34.927	2374.	2316.	*	847.5	42.2	2288.2	65.7	7.851	41.7	2218.1	64.2	15.562	7.888	0.658	18.8	-13.4
321	1193	5.851	34.913	2371.	2323.	*	898.9	45.5	2216.3	61.2	7.924	44.9	2218.4	59.7	16.711	7.777	0.611	4.6	-19.1
323	1342	5.169	34.888	2383.	2325.	*	881.5	41.6	2216.9	66.5	7.871	48.9	2219.3	64.8	15.226	7.817	0.652	8.2	-15.9
322	1342	5.169	34.884	2387.	2326.	*	796.1	41.3	2217.7	67.8	7.874	48.7	2228.1	65.2	15.118	7.821	0.667	8.7	-15.4
181	1386	9.125	34.877	2392.	2387.	*	665.9	34.6	2193.9	78.6	7.947	34.8	2196.5	76.5	12.813	7.892	0.782	19.6	-4.6
324	1499	4.472	34.899	2393.	2338.	*	769.4	48.7	2221.3	68.8	7.888	48.8	2224.8	66.8	14.858	7.828	0.674	7.9	-16.7
192	1538	4.516	34.857	2393.	2338.	*	766.5	48.7	2221.4	68.8	7.887	48.8	2224.1	65.9	14.923	7.826	0.673	7.5	-17.2
183	1686	3.827	34.827	2481.	2334.	*	726.9	39.6	2224.6	69.9	7.988	38.8	2227.7	67.5	14.446	7.848	0.698	7.7	-17.5
184	1837	3.183	34.888	2411.	2327.	*	624.9	35.8	2214.8	78.1	7.967	34.2	2217.5	75.4	12.767	7.894	0.769	14.8	-11.7
186	2183	2.395	34.765	2418.	2331.	*	596.8	34.3	2217.1	79.6	7.984	33.3	2221.3	76.4	12.686	7.897	0.778	11.4	-15.4
187	2382	2.149	34.756	2428.	2328.	*	511.5	29.7	2199.7	98.6	8.846	28.7	2284.6	86.7	11.176	7.952	0.884	19.6	-7.8
188	2578	1.999	34.745	2429.	2327.	*	944.1	31.8	2289.9	85.3	8.828	38.7	2215.8	81.3	12.892	7.918	0.828	12.8	-16.1
189	2779	1.887	34.738	2427.	2328.	*	537.2	31.6	2218.6	85.8	8.825	38.4	2216.2	81.4	12.183	7.914	0.829	9.9	-18.9
18	2967	1.696	34.733	2424.	2326.	*	537.9	31.7	2289.8	85.3	8.824	38.5	2214.9	80.6	12.442	7.985	0.828	6.8	-22.6
11	3174	1.613	34.738	2434.	2339.	*	535.9	31.7	2217.2	86.1	8.826	38.4	2223.6	81.8	12.682	7.988	0.825	4.8	-25.3
112	3373	1.534	34.727	2435.	2338.	*	542.3	32.2	2228.8	85.1	8.821	38.8	2227.5	79.7	12.985	7.887	0.812	1.1	-29.8
114	3631	1.457	34.725	2439.	2325.	*	488.8	28.6	2282.4	94.8	8.878	27.2	2289.9	87.9	11.875	7.925	0.895	6.8	-25.8
116	3949	1.396	34.728	2433.	2324.	*	494.9	29.5	2283.2	91.2	8.857	28.8	2211.3	84.7	12.682	7.988	0.862	-1.5	-34.5
117	3996	1.391	34.721	2429.	2318.	*	486.5	29.8	2196.8	92.1	8.863	27.5	2285.8	93.5	12.476	7.984	0.878	-1.3	-34.5
118	3997	1.392	34.728	2429.	2323.	*	584.1	38.1	2283.4	89.5	8.849	28.5	2211.5	83.8	12.899	7.889	0.845	-3.8	-37.8
119	4859	1.391	34.720	2438.	2324.	*	583.8	38.1	2284.4	89.5	8.849	28.5	2212.7	82.8	12.973	7.887	0.843	-5.8	-38.4
120	4189	1.395	34.720	2433.	2328.	*	481.3	28.7	2197.9	93.3	8.868	27.2	2286.4	86.5	12.463	7.984	0.898	-1.9	-35.5
121	4149	1.397	34.720	2432.	2319.	*	498.7	28.7	2197.8	93.3	8.868	27.1	2289.6	86.3	12.497	7.983	0.879	-2.6	-36.4
122	4169	1.488	34.720	2438.	2328.	*	491.8	29.3	2199.8	91.7	8.868	27.7	2287.5	84.8	12.792	7.893	0.863	-4.4	-38.2
123	4183	1.482	34.720	2438.	2328.	*	491.2	29.3	2198.9	91.8	8.859	27.7	2287.5	84.8	12.883	7.893	0.863	-4.6	-38.5

CARBONATE REPORT

GEOSSECS	INDIAN	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
		448	1	6 4 79	2157	8 1.1 N	98 3.3 E	4651
		448	3	7 4 78	2535	8 1.6 N	88 4.5 E	
		448	5	7 4 79	1844	8 2.2 N	98 9.5 E	4273

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	MEASURED PARAMETERS				CALC PARAMETERS P=1ATH.T=INSITU*				CALC. PARAMETERS P.T=INSITU				DELTA CO3= (CALC) (ARRAG) (M/KG)	DELTA CO3= (ARRAG) (M/KG)					
		TEMP. (C)	SAL. (8/88) (E-6)	TALK (E-6)	TIT TC02* (M/KG) (E-6)	GC TC02* (M/KG) (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)			CO3= (M/KG) (E-6)	AM (E-9)	PH	ICP (E-6)	
381	1	29.838	34.329	2252.	1889.	*	336.9	8.5	1624.7	255.8	8.263	*	8.5	1624.7	255.8	5.457	8.263	2.574	218.8	198.5
382	1	29.838	34.329	2258.	1886.	*	334.7	8.5	1621.1	256.4	8.265	*	8.5	1621.1	256.4	5.432	8.265	2.588	211.3	191.1
383	22	29.624	34.343	2253.	1898.	*	334.2	8.5	1623.8	255.7	8.265	*	8.5	1623.8	255.6	5.436	8.265	2.573	218.4	198.1
384	75	23.614	35.328	2318.	2047.	*	461.2	13.5	1844.5	188.9	8.139	*	13.5	1844.7	188.8	7.298	8.137	1.955	143.1	122.6
385	125	28.297	35.258	2311.	2185.	*	545.5	17.5	1935.8	151.7	8.867	*	17.5	1936.1	151.4	8.859	8.863	1.566	185.2	84.6
386	166	15.982	35.166	2311.	2166.	*	651.7	23.7	2829.3	113.8	7.983	*	23.7	2829.6	112.7	18.529	7.978	1.162	66.8	45.1
387	217	13.883	35.145	2316.	2187.	*	687.6	25.9	2858.1	183.1	7.967	*	25.8	2858.5	182.7	18.982	7.959	1.858	55.6	34.6
388	298	11.581	35.066	2315.	2198.	*	659.5	27.4	2875.2	95.4	7.963	*	27.3	2875.8	95.8	11.168	7.952	8.978	47.1	25.9
389	371	18.889	35.826	2322.	2215.	*	687.5	29.3	2895.8	89.9	7.945	*	29.2	2896.5	89.4	11.715	7.931	8.918	41.8	19.6
310	425	18.489	34.997	2322.	2287.	*	638.7	27.6	2885.4	94.8	7.973	*	27.4	2886.2	93.4	11.846	7.957	8.958	44.6	23.8
311	518	9.517	34.963	2321.	2232.	*	738.8	32.9	2119.8	98.1	7.911	*	32.7	2119.9	79.3	12.847	7.991	8.813	29.8	8.8
312	599	5.872	34.965	2332.	2258.	*	765.6	34.8	2138.5	76.7	7.997	*	34.5	2139.6	75.8	13.378	7.874	8.777	25.7	3.6
313	687	5.465	35.888	2345.	2281.	*	881.4	48.7	2172.9	67.4	7.839	*	48.4	2174.1	66.5	15.484	7.812	8.682	15.7	-6.6
314	747	8.353	34.996	2345.	2275.	*	825.7	38.3	2165.7	71.1	7.865	*	38.8	2167.8	78.1	14.574	7.836	8.719	18.7	-3.7
315	827	8.859	34.986	2347.	2284.	*	862.6	48.4	2175.8	67.8	7.847	*	48.8	2177.2	66.8	15.328	7.815	8.685	14.8	-7.8
316	982	7.593	34.985	2358.	2294.	*	844.4	48.2	2185.5	68.3	7.855	*	39.8	2187.1	67.2	15.133	7.828	8.689	14.6	-8.3
317	1086	6.551	34.935	2378.	2312.	*	853.9	42.2	2284.2	65.7	7.848	*	41.7	2286.8	64.4	15.536	7.889	8.659	18.8	-12.3
318	1127	5.894	34.911	2376.	2311.	*	798.3	39.9	2282.3	68.8	7.878	*	39.4	2284.3	67.3	14.672	7.834	8.688	12.6	-18.9
319	1245	5.632	34.895	2376.	2314.	*	888.3	48.8	2285.8	-67.3	7.872	*	48.2	2288.1	65.7	15.858	7.822	8.672	18.1	-13.8
328	1353	5.064	34.365	2386.	2315.	*	734.8	38.2	2285.2	71.6	7.986	*	37.6	2287.7	69.7	14.848	7.853	8.713	13.1	-11.1
321	1473	4.539	34.851	2386.	2322.	*	759.2	48.3	2213.4	68.3	7.898	*	39.6	2216.1	66.3	14.748	7.832	8.678	8.6	-16.8
322	1594	3.963	34.928	2392.	2318.	*	689.6	37.4	2287.7	73.8	7.928	*	36.7	2218.6	78.7	13.669	7.864	8.722	11.8	-13.1
323	1741	3.442	34.886	2488.	2323.	*	662.9	36.6	2211.9	74.5	7.943	*	35.8	2215.2	72.8	13.384	7.873	8.734	11.5	-13.8
181	1835	3.888	34.794	2486.	2322.	*	622.8	34.9	2289.1	78.8	7.967	*	34.1	2212.6	75.3	12.754	7.894	8.768	13.9	-11.8
324	1884	2.927	34.786	2484.	2322.	*	628.8	35.3	2289.8	76.9	7.964	*	34.5	2213.4	74.1	12.919	7.889	8.756	12.2	-13.6
182	1981	2.794	34.778	2489.	2323.	*	687.4	34.4	2289.6	79.8	7.977	*	33.5	2213.4	75.8	12.658	7.898	8.775	13.2	-13.8
183	2179	2.422	34.764	2411.	2326.	*	684.1	34.7	2212.8	79.5	7.978	*	33.7	2217.8	75.3	12.859	7.891	8.767	18.3	-16.4
184	2376	2.118	34.749	2413.	2327.	*	592.9	34.4	2213.5	79.8	7.984	*	33.4	2218.1	75.5	12.984	7.889	8.769	8.4	-19.8
185	2576	1.954	34.748	2417.	2322.	*	553.8	32.3	2286.1	93.6	8.812	*	31.2	2211.2	79.6	12.314	7.918	8.818	18.3	-17.7
186	2774	1.794	34.734	2421.	2319.	*	523.9	38.8	2288.9	87.3	8.834	*	29.7	2286.5	82.8	11.927	7.923	8.843	11.3	-17.4
187	2973	1.674	34.733	2421.	2319.	*	521.8	38.8	2288.9	87.3	8.835	*	29.6	2286.9	82.5	12.119	7.917	8.848	8.7	-28.7
188	3173	1.599	34.725	2424.	2324.	*	528.4	31.3	2286.4	86.3	8.838	*	38.8	2212.7	91.3	12.486	7.984	8.827	5.1	-25.1
189	3372	1.523	34.724	2428.	2333.	*	547.4	32.5	2216.6	83.8	8.816	*	31.1	2223.3	78.6	13.139	7.881	8.888	-8.1	-38.9
118	3578	1.493	34.724	2427.	2317.	*	491.3	29.2	2196.2	91.6	8.859	*	27.8	2283.5	85.7	12.183	7.917	8.572	4.5	-27.8
111	3768	1.438	34.719	2429.	2324.	*	588.5	38.3	2284.6	89.8	8.846	*	28.9	2212.3	82.9	12.727	7.895	8.844	-8.8	-33.1
112	3968	1.422	34.728	2429.	2328.	*	522.5	31.1	2289.9	86.9	8.835	*	29.6	2217.9	88.6	13.388	7.876	8.828	-5.9	-38.9
114	4175	1.486	34.728	2427.	2313.	*	476.4	28.4	2198.8	93.7	8.871	*	26.8	2199.4	86.7	12.448	7.985	8.883	-2.6	-36.4
115	4326	1.484	34.719	2426.	2313.	*	479.8	28.6	2191.1	93.2	8.868	*	27.8	2288.8	86.8	12.713	7.896	8.875	-5.5	-39.9
116	4425	1.489	34.718	2424.	2316.	*	495.7	29.6	2196.8	98.5	8.855	*	27.9	2284.9	83.2	13.237	7.878	8.947	-9.7	-44.5
117	4495	1.414	34.721	2423.	2317.	*	582.8	38.8	2197.6	89.4	8.849	*	28.2	2286.7	82.1	13.587	7.869	8.836	-11.8	-46.9
118	4496	1.413	34.719	2426.	2313.	*	479.8	28.6	2191.2	93.2	8.868	*	26.9	2288.4	85.7	12.911	7.889	8.872	-8.3	-43.4
119	4545	1.416	34.718	2422.	2316.	*	582.2	29.9	2196.7	89.3	8.845	*	28.2	2285.9	81.9	13.558	7.868	8.834	-12.7	-48.8
120	4575	1.419	34.722	2419.	2389.	*	487.6	29.1	2188.6	91.4	8.861	*	27.3	2197.8	83.8	13.248	7.878	8.853	-11.3	-46.7
121	4688	1.421	34.718	2428.	2313.	*	498.7	29.7	2195.4	89.9	8.852	*	28.8	2282.6	82.4	13.551	7.868	8.838	-13.1	-48.6
122	4621	1.424	34.718	2421.	2313.	*	495.1	29.5	2193.1	98.4	8.855	*	27.9	2282.4	92.8	13.479	7.878	8.843	-13.8	-48.6
123	4636	1.425	34.728	2421.	2388.	*	478.4	28.5	2186.4	93.1	8.869	*	26.8	2195.9	85.3	13.869	7.884	8.868	-18.7	-46.4

CARBONATE REPORT

GEOSSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 449 1 8 4 78 1511 5 8.4 S 79 59.8 E 5122
 449 3 8 4 78 2249 4 59.7 S 80 8.7 E 5124

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS					CALC PARAMETERS P=IATH.T=INSITU*					CALC. PARAMETERS P.T=INSITU					DELTA	DELTA				
SAMP NO	DEPTH (M)	TEMP (C)	SAL (B/00)	TALK (EQ/KG)	TIT (M/KG)	GC TC02 (M/KG)	PC02 (ATM)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	ICP	CO3= (CALC)	CO3= (ARAG)		
					(E-6)	(E-6)	(E-6)	(E-6)	(E-6)	(E-6)		(E-6)	(E-6)	(E-6)	(E-9)	(E-6)	(E-6)	(E-6)		
381	8	29.292	34.433	2259.	1983.	*	344.5	8.8	1642.9	231.2	8.254	*	8.8	1642.9	231.2	5.566	8.254	2.538	286.2	185.9
382	8	29.292	34.431	2258.	1981.	*	342.6	8.8	1648.3	231.9	8.256	*	8.8	1648.3	231.9	5.544	8.256	2.542	286.8	186.5
383	32	29.328	34.436	2261.	1984.	*	343.9	8.8	1643.3	231.9	8.256	*	8.8	1643.3	231.9	5.565	8.255	2.542	286.6	186.3
384	65	27.743	34.837	2286.	1942.	*	355.3	9.4	1689.5	243.1	8.242	*	9.4	1689.6	242.9	5.755	8.248	2.481	197.4	177.8
385	115	18.163	35.891	2387.	2145.	*	648.6	21.8	1999.2	124.8	7.998	*	21.8	1999.4	123.8	18.138	7.994	1.273	77.5	58.8
386	146	15.341	35.824	2389.	2169.	*	654.4	24.3	2034.9	189.9	7.988	*	24.2	2035.2	189.6	18.688	7.975	1.125	63.8	42.2
387	196	12.688	35.838	2316.	2288.	*	689.4	27.8	2076.9	95.3	7.958	*	27.7	2077.3	95.8	11.489	7.943	8.978	47.9	28.9
388	247	11.444	34.988	2315.	2192.	*	625.3	28.2	2087.2	98.6	7.984	*	28.1	2087.7	98.7	10.686	7.974	1.887	58.7	29.6
389	293	18.762	34.931	2314.	2285.	*	669.8	28.6	2085.8	98.7	7.954	*	28.5	2088.2	98.3	11.393	7.943	8.925	42.5	21.2
318	348	18.397	34.924	2314.	2288.	*	673.5	29.2	2089.8	89.8	7.958	*	29.1	2090.4	88.5	11.558	7.937	8.986	48.3	18.3
311	398	9.888	34.893	2317.	2218.	*	655.8	28.9	2091.8	89.4	7.968	*	28.7	2092.5	88.8	11.355	7.945	8.988	48.1	18.6
312	446	9.433	34.866	2318.	2218.	*	678.9	38.3	2182.1	85.6	7.945	*	38.1	2182.9	85.8	11.796	7.928	8.869	36.8	14.3
313	521	8.958	34.855	2328.	2235.	*	712.9	32.4	2121.5	81.1	7.924	*	32.2	2122.4	80.4	12.472	7.984	8.821	38.8	8.9
314	586	8.447	34.854	2332.	2256.	*	784.8	36.3	2146.1	73.7	7.885	*	36.8	2147.1	72.9	13.759	7.861	8.744	22.6	8.5
315	787	7.816	34.848	2346.	2272.	*	782.2	37.0	2162.2	72.8	7.885	*	38.7	2163.4	71.9	13.867	7.858	8.734	28.8	-1.5
316	885	7.225	34.832	2352.	2289.	*	834.1	48.2	2181.8	67.7	7.858	*	39.9	2182.5	66.7	14.911	7.827	8.681	14.8	-7.8
317	915	5.568	34.814	2364.	2288.	*	798.8	39.4	2189.5	69.1	7.875	*	39.8	2191.1	67.9	14.478	7.839	8.693	15.8	-7.9
318	1085	5.993	34.797	2369.	2382.	*	778.4	39.1	2193.3	69.6	7.885	*	38.7	2195.1	68.2	14.283	7.845	8.696	14.6	-8.6
319	1114	5.485	34.786	2378.	2384.	*	733.8	37.7	2194.4	71.9	7.987	*	37.2	2198.4	78.4	13.716	7.863	8.718	15.8	-7.7
328	1235	4.969	34.786	2383.	2312.	*	728.2	38.1	2282.5	71.5	7.989	*	37.5	2284.7	69.7	13.889	7.868	8.711	14.1	-9.8
321	1392	4.448	34.794	2389.	2323.	*	745.3	39.7	2214.8	69.3	7.898	*	39.1	2216.5	67.4	14.372	7.842	8.688	18.3	-14.8
322	1548	3.985	34.785	2391.	2318.	*	692.3	37.6	2287.9	72.5	7.928	*	36.9	2288.8	70.3	13.668	7.865	8.717	11.8	-12.9
323	1689	3.489	34.777	2395.	2328.	*	669.6	37.8	2289.8	73.4	7.938	*	36.3	2282.7	71.8	13.475	7.878	8.724	11.8	-14.2
181	1787	3.858	34.772	2399.	2312.	*	685.6	33.9	2198.8	79.3	7.977	*	33.2	2282.2	78.6	12.484	7.986	8.781	13.7	-9.9
324	1835	2.939	34.769	2481.	2318.	*	612.3	34.5	2283.2	78.3	7.973	*	33.7	2286.8	75.6	12.593	7.988	8.778	14.1	-11.6
182	1983	2.597	34.762	2484.	2319.	*	686.2	34.6	2286.8	78.4	7.976	*	33.7	2289.8	75.5	12.683	7.897	8.769	12.5	-13.6
183	2184	2.288	34.754	2488.	2313.	*	557.8	32.1	2197.5	83.4	8.889	*	31.2	2281.8	88.8	11.955	7.922	8.815	14.9	-11.9
184	2383	2.873	34.747	2489.	2314.	*	553.3	32.2	2198.4	83.4	8.811	*	31.2	2283.1	79.7	12.127	7.916	8.812	12.6	-14.9
185	2579	1.915	34.748	2411.	2318.	*	527.5	38.9	2192.6	86.6	8.838	*	29.8	2197.7	82.5	11.822	7.927	8.848	13.2	-14.9
186	2779	1.791	34.736	2411.	2311.	*	528.4	31.1	2193.9	86.8	8.829	*	29.9	2199.5	81.6	12.878	7.918	8.831	18.1	-18.7
187	2977	1.682	34.736	2417.	2318.	*	531.8	31.4	2281.8	85.6	8.827	*	38.2	2286.9	88.9	12.359	7.988	8.824	7.1	-22.4
98	3176	1.577	34.729	2417.	2318.	*	538.8	31.4	2288.9	85.7	8.828	*	38.1	2287.2	88.6	12.565	7.981	8.821	4.4	-25.8
189	3374	1.488	34.728	2428.	2317.	*	513.9	38.8	2198.7	87.7	8.848	*	29.2	2285.5	82.3	12.438	7.986	8.838	3.6	-27.2
118	1619	1.423	34.725	2423.	2315.	*	496.3	29.6	2194.9	98.5	8.854	*	28.2	2282.3	84.5	12.381	7.918	8.861	2.7	-29.8
111	3868	1.481	34.723	2423.	2321.	*	516.9	38.9	2282.8	87.3	8.838	*	29.3	2218.6	81.1	13.881	7.883	8.826	-4.8	-36.7
112	4118	1.481	34.722	2422.	2318.	*	582.2	38.8	2196.7	89.4	8.849	*	28.4	2285.8	82.7	13.835	7.885	8.841	-5.9	-39.5
114	4375	1.481	34.723	2422.	2389.	*	478.2	28.5	2187.4	93.1	8.889	*	26.9	2196.4	85.7	12.751	7.894	8.873	-6.4	-41.8
115	4642	1.481	34.728	2415.	2385.	*	485.9	29.8	2184.7	91.3	8.861	*	27.2	2194.2	83.6	13.388	7.876	8.851	-12.5	-48.2
116	4898	1.416	34.728	2413.	2387.	*	499.5	29.8	2188.1	89.1	8.858	*	27.9	2197.9	81.2	13.981	7.854	8.826	-18.8	-53.5
118	4969	1.419	34.721	2412.	2388.	*	588.5	38.2	2189.7	88.1	8.844	*	28.3	2199.7	88.8	14.275	7.845	8.815	-21.2	-58.2
117	4969	1.419	34.722	2413.	2389.	*	588.8	38.2	2198.7	88.1	8.844	*	28.3	2288.6	88.1	14.278	7.845	8.815	-21.1	-58.1
119	5817	1.414	34.728	2489.	2388.	*	518.4	38.8	2198.8	86.4	8.836	*	28.9	2288.7	78.4	14.623	7.835	8.798	-23.5	-68.7
120	5847	1.413	34.721	2413.	2387.	*	499.9	29.8	2188.9	89.2	8.858	*	27.9	2198.1	81.8	14.198	7.848	8.824	-21.5	-58.8
121	5872	1.415	34.728	2411.	2386.	*	582.5	38.8	2197.5	86.6	8.847	*	28.8	2197.6	88.3	14.311	7.844	8.818	-22.5	-68.8
122	5893	1.417	34.728	2418.	2382.	*	491.5	29.3	2182.6	98.1	8.856	*	27.4	2192.9	81.7	14.852	7.852	8.832	-21.5	-59.8
123	5182	1.418	34.728	2489.	2382.	*	495.8	29.5	2182.9	89.6	8.853	*	27.6	2193.2	81.3	14.161	7.849	8.827	-22.1	-59.7
124	5182	1.418	34.719	2411.	2298.	*	475.5	28.3	2176.8	92.8	8.869	*	28.5	2187.2	84.3	13.625	7.866	8.858	-19.8	-56.6

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 458 1 18 4 78 1551 18 8.5 S 79 59.2 E 5347
 458 3 18 4 78 2359 9 57.6 S 79 59.7 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (MG/KG)	TIT		CALC. PARAMETERS P=100M.T=INSITU					CALC. PARAMETERS P.T=INSITU					DELTA CO3= (MG/KG)	DELTA CO3= (ARAG)			
					TC02* (E-6)	GC TC02 (E-6)	PCO2 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	PH			ICP (E-6)	ICP (E-6)	ICP (E-6)
301	1	28.232	34.231	2248.	1893.	*	*	326.6	8.6	1634.1	250.3	0.269	*	8.6	1634.1	250.3	5.385	8.269	2.512	205.2	104.9
302	1	28.232	34.232	2248.	1892.	*	*	325.1	8.6	1632.5	250.9	0.270	*	8.6	1632.5	250.9	5.363	8.270	2.518	205.8	105.5
303	18	28.202	34.687	2271.	1916.	*	*	337.1	8.9	1636.7	250.4	0.260	*	8.9	1636.8	250.4	5.504	8.259	2.540	205.2	104.8
304	63	24.203	34.922	2297.	2028.	*	*	431.3	12.5	1989.1	198.4	0.165	*	12.5	1889.2	198.3	6.877	8.163	2.838	152.7	132.2
305	104	19.397	34.757	2287.	2095.	*	*	556.5	18.2	1934.5	142.3	0.858	*	18.1	1934.7	142.1	8.816	8.855	1.448	96.8	75.3
306	133	17.442	34.938	2300.	2131.	*	*	589.7	20.6	1982.9	127.6	0.827	*	20.5	1983.1	127.4	9.583	8.822	1.384	89.9	60.2
307	165	14.321	34.673	2308.	2156.	*	*	682.1	23.1	2021.3	111.6	0.808	*	23.8	2021.7	111.3	9.952	8.882	1.132	64.5	43.6
308	246	11.516	34.737	2315.	2194.	*	*	632.8	26.4	2069.9	97.7	0.981	*	26.4	2070.4	97.3	10.678	7.972	0.991	49.8	28.6
309	318	10.268	34.702	2316.	2204.	*	*	648.4	27.9	2083.9	92.2	0.970	*	27.8	2084.5	91.8	11.003	7.959	0.936	43.7	22.4
310	405	9.128	34.738	2314.	2200.	*	*	681.5	27.2	2073.9	92.8	0.990	*	27.1	2088.7	92.2	10.998	7.975	0.939	43.5	21.9
312	576	7.512	34.785	2338.	2256.	*	*	722.8	34.5	2145.8	76.5	0.915	*	34.3	2146.1	75.7	12.751	7.893	0.778	25.5	3.5
313	685	6.886	34.728	2348.	2281.	*	*	754.5	38.8	2172.8	69.4	0.876	*	38.5	2174.0	68.5	14.158	7.849	0.697	17.4	-4.9
314	774	6.416	34.739	2357.	2294.	*	*	908.8	48.1	2186.3	67.6	0.868	*	39.8	2187.7	66.6	14.519	7.838	0.678	14.8	-7.8
315	875	5.620	34.693	2368.	2297.	*	*	748.3	37.8	2187.9	71.3	0.902	*	37.4	2189.4	70.1	13.550	7.868	0.713	17.5	-5.4
316	986	5.148	34.698	2375.	2306.	*	*	748.5	38.5	2197.8	70.5	0.901	*	38.8	2198.8	69.1	13.724	7.863	0.703	15.6	-7.6
317	1104	4.781	34.728	2388.	2308.	*	*	715.2	37.6	2198.5	71.8	0.915	*	37.1	2208.6	70.3	13.453	7.871	0.715	15.7	-7.8
318	1162	4.681	34.743	2381.	2312.	*	*	731.3	38.6	2202.8	70.6	0.905	*	38.1	2204.9	69.8	13.825	7.859	0.703	13.9	-9.8
319	1262	4.394	34.755	2385.	2314.	*	*	713.8	38.8	2204.5	71.4	0.915	*	37.5	2206.8	69.7	13.646	7.865	0.718	13.7	-10.2
320	1368	4.877	34.754	2389.	2315.	*	*	698.8	37.2	2204.8	72.9	0.928	*	36.6	2207.4	71.8	13.378	7.874	0.723	14.1	-10.1
322	1598	3.314	34.757	2395.	2307.	*	*	685.9	33.6	2193.6	79.8	0.970	*	33.8	2196.7	77.4	12.181	7.914	0.788	18.2	-6.7
323	1719	2.988	34.752	2395.	2309.	*	*	686.4	34.1	2196.3	78.6	0.976	*	33.3	2199.6	76.1	12.369	7.908	0.775	15.7	-9.6
101	1789	2.866	34.748	2398.	2312.	*	*	613.6	34.6	2199.6	77.4	0.971	*	33.9	2203.0	75.1	12.601	7.908	0.763	14.1	-11.5
324	1836	2.753	34.754	2397.	2313.	*	*	611.1	34.6	2200.7	77.7	0.972	*	33.8	2204.2	75.0	12.617	7.899	0.764	13.5	-12.2
102	1986	2.541	34.746	2399.	2308.	*	*	576.3	32.9	2193.9	81.2	0.995	*	32.1	2197.7	78.2	12.138	7.916	0.796	15.2	-11.8
103	2105	2.278	34.744	2400.	2314.	*	*	592.8	34.2	2201.1	78.7	0.983	*	33.2	2205.3	75.4	12.788	7.896	0.768	18.4	-16.4
104	2302	2.879	34.738	2404.	2299.	*	*	513.8	29.8	2188.8	88.4	0.841	*	28.9	2185.5	84.6	11.322	7.946	0.861	17.4	-18.8
105	2588	1.983	34.734	2401.	2303.	*	*	533.2	31.3	2186.9	84.7	0.823	*	30.3	2192.8	88.7	12.832	7.928	0.822	11.4	-16.7
106	2777	1.798	34.738	2403.	2301.	*	*	518.5	30.5	2183.6	86.9	0.835	*	29.4	2189.2	82.4	11.982	7.924	0.839	10.9	-17.9
107	2976	1.687	34.727	2404.	2297.	*	*	499.8	29.4	2178.0	89.5	0.858	*	28.3	2184.8	84.7	11.705	7.932	0.862	18.8	-18.6
108	3174	1.577	34.723	2418.	2386.	*	*	589.3	30.2	2187.7	88.1	0.842	*	28.9	2194.1	83.8	12.138	7.916	0.845	6.8	-23.4
109	3373	1.477	34.728	2415.	2311.	*	*	588.8	30.2	2192.7	88.1	0.844	*	28.9	2199.5	82.6	12.322	7.909	0.841	4.8	-26.9
110	3676	1.394	34.717	2421.	2311.	*	*	488.3	29.1	2190.3	91.5	0.868	*	27.7	2197.8	85.5	12.188	7.914	0.878	3.8	-29.8
111	3967	1.365	34.716	2412.	2383.	*	*	487.9	29.1	2183.2	90.7	0.859	*	27.6	2191.2	84.2	12.567	7.911	0.896	-2.3	-35.4
112	4267	1.368	34.717	2415.	2386.	*	*	486.9	29.2	2186.8	90.8	0.859	*	27.6	2194.6	83.8	12.933	7.888	0.893	-6.9	-41.1
114	4573	1.375	34.716	2414.	2388.	*	*	499.1	29.8	2189.8	89.2	0.858	*	28.1	2198.2	81.7	13.566	7.868	0.832	-13.4	-48.8
115	4878	1.406	34.718	2412.	2381.	*	*	482.1	28.8	2188.5	91.8	0.864	*	26.9	2198.3	83.7	13.585	7.878	0.852	-15.9	-52.6
116	5118	1.436	34.716	2412.	2384.	*	*	492.6	29.4	2194.5	90.2	0.856	*	27.4	2194.8	81.8	14.096	7.851	0.832	-21.8	-59.5
118	5187	1.444	34.716	2410.	2389.	*	*	517.3	30.8	2191.7	86.5	0.836	*	28.8	2202.8	78.2	14.869	7.828	0.796	-26.5	-64.4
117	5188	1.444	34.715	2412.	2386.	*	*	508.1	29.8	2187.8	89.2	0.849	*	27.8	2197.4	88.7	14.392	7.842	0.822	-24.8	-61.9
119	5238	1.458	34.716	2418.	2381.	*	*	488.6	29.1	2181.3	90.6	0.859	*	27.1	2191.9	92.0	14.154	7.849	0.834	-23.6	-61.7
120	5258	1.454	34.715	2413.	2382.	*	*	483.1	29.8	2181.4	91.3	0.855	*	26.9	2192.1	93.1	14.025	7.853	0.845	-23.8	-61.3
121	5293	1.457	34.716	2409.	2386.	*	*	509.9	30.3	2183.2	87.5	0.841	*	28.3	2198.7	79.0	14.813	7.829	0.884	-37.5	-65.9
122	5312	1.460	34.715	2411.	2381.	*	*	496.2	29.9	2185.8	91.2	0.861	*	27.8	2191.5	92.5	14.188	7.848	0.839	-24.3	-62.8
123	5329	1.462	34.715	2411.	2382.	*	*	489.6	29.1	2182.2	90.7	0.858	*	27.2	2192.9	81.9	14.292	7.845	0.834	-25.1	-63.6
124	5328	1.462	34.716	2415.	2385.	*	*	487.8	29.8	2184.7	91.3	0.861	*	27.8	2195.5	82.5	14.159	7.848	0.839	-24.6	-63.1

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 451 1 13 4 78 0320 14 59.3 S 79 57.6 E 5816
 451 3 13 4 78 1104 14 59.0 S 79 54.8 E

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

MEASURED PARAMETERS						CALC. PARAMETERS P=1ATM, T=INSITU						CALC. PARAMETERS P, T=INSITU							
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/100)	TALK (E-6)	TIT TC02 (E-6)	GC TC02 (E-6)	PC02 (E-6)	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HCO3- (E-6)	CO3= (E-6)	PH	PH	ICP (E-6)	DELTA CO3- (E-6)	DELTA CO3- (E-6)
301	1	27.825	34.550	2262.	1911.	*	335.1	8.9	1634.6	247.5	8.260	8.9	1634.6	247.5	5.501	8.260	2.507	282.4	182.8
302	1	27.825	34.547	2264.	1908.	*	328.1	8.7	1648.4	250.9	8.267	8.7	1648.4	250.9	5.406	8.267	2.541	285.8	185.5
303	45	27.839	34.548	2263.	1909.	*	330.8	8.8	1658.7	249.5	8.264	8.8	1658.8	249.4	5.468	8.263	2.526	284.8	183.6
304	57	24.835	34.918	2289.	1969.	*	344.7	10.8	1733.9	226.8	8.242	10.8	1733.2	225.8	5.765	8.239	2.311	179.9	159.4
305	141	20.998	35.873	2301.	2032.	*	395.7	12.9	1829.8	191.5	8.186	12.4	1828.4	191.2	6.584	8.181	1.966	144.9	124.2
308	197	17.133	34.893	2300.	2109.	*	509.9	17.9	1998.4	140.7	8.081	17.9	1950.8	140.3	8.431	8.074	1.435	93.5	72.6
307	240	14.449	34.842	2307.	2120.	*	498.4	18.7	1977.1	132.2	8.080	18.6	1977.7	131.7	8.336	8.077	1.345	84.4	63.3
308	278	15.484	35.393	2326.	2102.	*	468.4	19.8	1926.9	168.1	8.153	14.9	1927.5	159.6	7.833	8.153	1.655	112.2	91.1
309	319	13.876	35.394	2324.	2080.	*	356.4	13.8	1987.6	168.7	8.200	13.7	1980.3	166.8	6.384	8.193	1.722	118.2	97.8
310	379	11.991	35.139	2316.	2093.	*	347.9	14.3	1921.2	157.5	8.209	14.2	1922.1	156.7	6.373	8.196	1.614	106.3	86.9
311	459	9.999	34.840	2308.	2191.	*	466.5	20.5	2013.5	117.8	8.091	20.4	2014.5	116.2	8.425	8.074	1.186	67.1	45.4
312	550	8.825	34.711	2305.	2166.	*	497.4	22.7	2037.0	106.3	8.062	22.6	2038.1	103.3	9.806	8.042	1.872	55.5	33.6
313	656	7.106	34.599	2309.	2190.	*	562.3	27.3	2080.3	90.4	8.009	27.0	2081.6	89.4	10.386	7.984	0.907	38.6	16.4
314	760	6.276	34.639	2331.	2249.	*	603.7	34.1	2108.9	73.9	7.931	33.8	2100.3	74.9	12.548	7.981	0.760	23.2	8.7
319	899	5.838	34.674	2393.	2272.	*	685.9	34.8	2161.4	75.0	7.931	34.4	2163.0	74.6	12.643	7.890	0.759	22.2	-8.6
316	996	5.440	34.701	2361.	2285.	*	704.9	36.2	2179.3	73.5	7.928	35.8	2177.0	72.2	13.184	7.883	0.734	18.9	-4.2
317	1099	5.083	34.701	2365.	2289.	*	696.6	36.3	2175.2	73.5	7.924	35.8	2181.2	72.8	13.185	7.883	0.733	17.9	-5.5
318	1156	4.702	34.702	2369.	2292.	*	682.6	36.8	2182.8	74.0	7.931	35.5	2184.1	72.3	13.088	7.886	0.736	17.3	-6.3
319	1297	4.343	34.704	2367.	2308.	*	726.4	38.8	2192.8	69.2	7.984	38.3	2194.2	67.5	13.984	7.854	0.687	11.5	-12.4
320	1394	3.990	34.701	2301.	2297.	*	633.4	34.4	2105.1	77.5	7.960	33.8	2187.7	75.6	12.394	7.907	0.769	18.7	-5.5
321	1457	3.671	34.701	2300.	2303.	*	660.8	36.2	2192.8	74.1	7.942	35.5	2195.5	72.8	13.047	7.884	0.732	14.2	-18.4
322	1550	3.309	34.712	2308.	2301.	*	643.3	35.6	2190.4	75.8	7.951	34.9	2193.3	72.7	12.807	7.890	0.748	14.1	-18.8
323	1690	3.816	34.723	2304.	2294.	*	585.7	32.9	2188.7	80.4	7.980	32.2	2184.8	77.8	11.998	7.921	0.792	17.7	-7.6
321	1706	2.899	34.725	2307.	2299.	*	575.1	32.5	2181.8	81.5	7.995	31.7	2184.5	78.8	11.901	7.924	0.802	17.8	-7.7
324	1847	2.721	34.729	2307.	2304.	*	611.8	34.7	2192.3	77.8	7.970	33.9	2195.9	74.3	12.682	7.897	0.756	12.7	-13.1
182	1982	2.517	34.732	2390.	2300.	*	576.7	33.0	2186.5	80.5	7.993	32.2	2190.4	77.5	12.179	7.914	0.789	14.5	-11.6
183	2184	2.219	34.734	2390.	2302.	*	579.8	33.5	2189.0	79.5	7.990	32.6	2193.2	76.2	12.497	7.903	0.776	11.2	-15.7
184	2301	2.020	34.735	2394.	2291.	*	516.3	30.1	2173.8	87.1	8.036	29.1	2178.5	83.3	11.441	7.942	0.848	16.2	-11.3
189	2579	1.879	34.732	2399.	2295.	*	525.4	30.8	2178.6	85.7	8.029	29.7	2183.7	81.6	11.850	7.926	0.831	12.3	-15.8
186	2774	1.749	34.730	2396.	2300.	*	538.4	31.7	2104.7	83.6	8.019	30.6	2190.1	79.3	12.365	7.908	0.807	7.8	-21.0
187	2969	1.698	34.730	2400.	2297.	*	511.4	30.2	2179.5	87.3	8.039	29.8	2195.4	82.6	11.994	7.921	0.840	8.0	-28.6
180	3163	1.572	34.727	2402.	2301.	*	517.5	30.7	2184.8	96.3	8.039	29.4	2190.3	81.3	12.347	7.900	0.827	5.2	-24.9
189	3399	1.409	34.729	2401.	2302.	*	522.7	31.1	2105.7	85.2	8.030	29.7	2192.4	79.9	12.710	7.896	0.813	1.4	-29.4
110	3950	1.423	34.724	2400.	2297.	*	481.3	28.7	2176.6	91.7	8.064	27.3	2183.9	95.8	11.962	7.927	0.873	4.8	-26.8
111	3756	1.382	34.722	2403.	2295.	*	489.4	29.2	2175.8	90.8	8.056	27.8	2183.4	83.8	12.484	7.906	0.853	8.2	-32.1
112	4009	1.365	34.720	2406.	2297.	*	486.1	29.8	2177.4	90.5	8.060	27.5	2185.6	83.9	12.684	7.908	0.854	-3.1	-36.3
114	4269	1.372	34.720	2409.	2296.	*	473.3	28.3	2175.1	92.7	8.071	26.7	2183.8	85.5	12.575	7.900	0.870	-5.1	-39.4
119	4524	1.394	34.719	2400.	2306.	*	512.6	30.6	2108.4	87.8	8.039	28.0	2197.4	79.8	13.882	7.850	0.812	-14.6	-49.8
116	4745	1.419	34.719	2410.	2299.	*	481.5	28.7	2170.6	91.7	8.064	26.9	2100.2	83.8	13.343	7.875	0.853	-13.9	-50.8
118	4842	1.431	34.719	2400.	2303.	*	502.1	29.9	2104.6	80.5	8.047	28.1	2194.2	80.7	14.014	7.853	0.821	-10.5	-55.8
117	4043	1.431	34.720	2409.	2296.	*	474.7	28.3	2175.0	92.7	8.070	26.5	2184.9	84.6	13.209	7.877	0.861	-14.6	-51.1
119	4999	1.439	34.719	2400.	2301.	*	495.3	29.5	2101.9	89.6	8.053	27.7	2191.8	81.6	13.921	7.856	0.830	-18.7	-55.4
120	4937	1.442	34.721	2411.	2296.	*	469.4	28.0	2174.1	93.9	8.074	26.2	2104.2	85.6	13.253	7.878	0.871	-15.1	-51.9
121	4962	1.445	34.719	2412.	2290.	*	447.5	26.7	2153.7	97.7	8.093	24.9	2176.8	89.1	12.699	7.896	0.907	-11.9	-40.9
122	4981	1.447	34.710	2410.	2297.	*	475.5	26.3	2175.9	92.8	8.069	26.5	2186.8	84.5	13.474	7.871	0.860	-16.9	-54.8
123	4995	1.449	34.721	2400.	2290.	*	485.1	28.9	2177.9	91.2	8.061	27.0	2180.0	82.9	13.760	7.861	0.844	-18.7	-55.8
124	4995	1.449	34.719	2410.	2294.	*	465.9	27.7	2171.8	94.4	8.077	25.9	2102.1	86.0	13.236	7.878	0.875	-15.6	-52.7

CARBONATE REPORT

GEOSECS INDIAN STATION CAST DATE TIME LATITUDE LONGITUDE BOT DEPTH
 452 1 15 4 78 2444 28 5.7 S 79 59.1 E 4921
 452 3 15 4 78 1219 28 5.7 S 79 57.5 E 4772

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/KG)

SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (ED/KG)	TIT (E-6)	GC TC02 (M/KG)	*CALC PARAMETERS P=1ATH.T=INSITU*					CALC. PARAMETERS P,T=INSITU					DELTA CO3 (M/KG)	DELTA CO3 (ARRG) (M/KG)	
							PCO2 (ATH) (M/KG)	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	H2CO3 (M/KG)	HCO3- (M/KG)	CO3= (M/KG)	PH	PH			10P (E-6)
381	24	26.882	34.748	2282.	1924.	*	319.8	8.7	1663.2	252.1	8.276	8.7	1663.3	252.1	5.385	8.273	2.568	286.7	186.4
382	24	26.882	34.747	2282.	1923.	*	320.8	8.7	1664.7	251.9	8.274	8.7	1664.8	251.5	5.328	8.273	2.561	286.2	189.8
383	33	26.822	34.748	2288.	1929.	*	323.3	8.8	1666.1	258.1	8.271	8.8	1666.2	258.8	5.368	8.278	2.547	284.7	184.3
384	75	25.344	34.313	2318.	1872.	*	334.9	9.4	1718.4	244.2	8.259	9.4	1718.6	244.8	5.545	8.256	2.526	198.3	177.9
385	89	23.282	35.364	2328.	1887.	*	327.4	9.7	1742.8	234.5	8.261	9.7	1743.8	234.3	5.517	8.258	2.429	188.5	168.8
386	119	21.876	35.288	2319.	2024.	*	356.6	11.2	1884.1	288.7	8.226	11.2	1884.4	288.4	6.883	8.222	2.155	162.3	141.7
387	155	19.998	35.281	2326.	2842.	*	361.8	11.7	1829.3	281.8	8.228	11.7	1829.7	288.7	6.184	8.214	2.873	154.3	133.6
388	196	18.783	35.389	2337.	2898.	*	355.5	11.9	1848.9	197.2	8.223	11.9	1849.4	196.8	6.874	8.217	2.841	158.1	129.2
389	252	16.943	35.828	2342.	2887.	*	355.7	12.5	1877.3	187.2	8.218	12.5	1877.9	186.6	6.174	8.209	1.943	139.5	118.5
318	282	15.962	35.689	2343.	2881.	*	347.6	12.6	1883.8	184.6	8.223	12.6	1884.5	184.8	6.114	8.214	1.921	136.6	115.6
311	343	13.889	35.352	2328.	2893.	*	357.7	13.9	1913.8	166.1	8.285	13.8	1913.8	165.4	6.487	8.193	1.714	117.4	96.2
312	427	11.858	35.899	2318.	2894.	*	344.4	14.2	1921.8	158.2	8.213	14.1	1922.6	157.3	6.343	8.198	1.618	188.6	87.1
313	532	10.573	34.988	2386.	2186.	*	368.2	15.9	1947.5	142.6	8.183	15.7	1948.7	141.6	6.862	8.164	1.449	92.8	78.2
314	684	9.472	34.749	2383.	2114.	*	368.5	16.5	1968.8	136.7	8.179	16.3	1962.1	135.6	6.961	8.157	1.381	85.4	63.4
315	784	8.468	34.639	2298.	2126.	*	393.5	18.2	1982.8	125.8	8.158	18.8	1984.3	123.6	7.912	8.124	1.255	72.6	58.3
316	793	6.864	34.527	2387.	2176.	*	482.7	23.6	2051.2	131.2	8.868	23.4	2052.8	99.8	9.174	8.837	1.818	48.8	25.4
317	851	5.872	34.496	2314.	2212.	*	571.6	25.8	2097.6	85.5	7.998	28.7	2099.2	84.2	10.828	7.965	0.851	31.8	9.8
318	958	5.343	34.977	2345.	2263.	*	663.3	34.2	2152.7	76.8	7.942	33.8	2154.5	74.7	12.455	7.985	0.757	21.4	-1.7
319	1051	4.818	34.689	2358.	2288.	*	617.8	32.5	2155.4	88.2	7.971	32.8	2157.4	78.6	11.759	7.938	0.797	24.5	1.1
328	1198	4.382	34.647	2368.	2289.	*	661.4	35.4	2178.7	74.9	7.942	34.9	2188.9	73.2	12.733	7.895	0.744	17.8	-6.8
321	1348	3.794	34.672	2372.	2286.	*	616.9	33.7	2174.8	78.3	7.969	33.1	2176.6	76.3	12.147	7.916	0.776	19.5	-4.7
322	1497	3.437	34.697	2388.	2298.	*	638.8	34.8	2186.7	76.5	7.968	34.2	2189.5	74.3	12.569	7.981	0.756	16.1	-8.6
323	1668	3.889	34.719	2384.	2294.	*	587.9	32.9	2188.6	88.5	7.987	32.2	2183.8	78.8	11.998	7.921	0.794	18.1	-7.8
181	1797	2.873	34.723	2389.	2294.	*	563.2	31.8	2179.2	83.8	8.884	31.1	2182.6	88.3	11.628	7.935	0.818	19.6	-5.8
324	1839	2.797	34.727	2393.	2297.	*	557.9	31.6	2181.8	83.6	8.888	38.9	2185.4	88.8	11.689	7.935	0.822	19.2	-6.5
182	1984	2.583	34.728	2393.	2385.	*	586.3	33.9	2191.8	79.6	7.987	32.7	2195.7	76.6	12.356	7.988	0.788	13.6	-12.5
183	2212	2.288	34.729	2396.	2294.	*	524.4	38.3	2176.9	86.7	8.831	29.5	2181.3	83.2	11.393	7.943	0.847	17.9	-9.8
184	2435	1.989	34.728	2393.	2287.	*	585.2	29.5	2168.7	88.8	8.844	28.5	2173.6	84.9	11.279	7.948	0.864	17.1	-18.5
189	2651	1.849	34.728	2394.	2291.	*	513.8	38.1	2173.8	87.2	8.838	29.8	2179.8	82.9	11.683	7.932	0.844	12.8	-15.5
186	2813	1.741	34.727	2393.	2287.	*	499.7	29.4	2168.9	88.7	8.848	28.3	2174.6	84.1	11.598	7.936	0.856	12.2	-16.7
187	2934	1.665	34.738	2397.	2291.	*	499.7	29.5	2172.7	88.8	8.848	28.4	2178.6	84.8	11.713	7.931	0.855	18.7	-18.6
188	3897	1.594	34.729	2488.	2292.	*	492.6	29.2	2172.9	89.9	8.854	28.8	2179.1	84.9	11.729	7.931	0.864	9.6	-28.3
189	3282	1.511	34.726	2482.	2296.	*	498.5	29.6	2177.4	88.9	8.849	28.3	2184.1	83.6	12.866	7.918	0.851	6.1	-24.5
118	3478	1.437	34.725	2483.	2295.	*	498.4	29.2	2175.8	98.8	8.856	27.9	2182.8	84.3	12.185	7.917	0.858	4.3	-27.8
111	3632	1.412	34.723	2484.	2296.	*	489.9	29.2	2176.8	98.8	8.856	27.8	2184.1	84.8	12.266	7.911	0.855	2.8	-29.8
112	3871	1.388	34.728	2411.	2381.	*	484.4	28.9	2188.9	91.2	8.862	27.5	2188.8	84.8	12.376	7.987	0.863	-8.4	-33.1
114	4281	1.371	34.719	2412.	2385.	*	493.4	29.6	2183.7	89.7	8.853	28.8	2194.2	82.8	13.828	7.883	0.843	-6.9	-48.8
115	4413	1.382	34.718	2414.	2385.	*	488.9	29.2	2183.1	98.8	8.859	27.5	2194.8	83.5	13.111	7.882	0.858	-9.2	-44.8
116	4528	1.392	34.717	2413.	2312.	*	517.6	38.9	2195.5	86.6	8.836	29.1	2283.5	79.4	13.975	7.855	0.888	-14.9	-58.1
118	4689	1.399	34.718	2413.	2298.	*	468.8	28.8	2176.1	93.9	8.875	26.3	2185.6	86.1	12.838	7.891	0.877	-9.5	-45.8
117	4689	1.399	34.719	2417.	2384.	*	476.8	28.5	2182.6	93.8	8.869	26.7	2192.8	85.3	13.822	7.885	0.868	-10.4	-45.9
119	4688	1.487	34.718	2414.	2318.	*	587.8	38.2	2191.5	88.1	8.844	28.4	2281.8	88.6	13.988	7.857	0.828	-16.1	-52.8
128	4718	1.412	34.725	2489.	2293.	*	463.8	27.7	2178.9	94.4	8.878	26.8	2188.6	86.4	12.898	7.898	0.888	-18.9	-46.9
121	4743	1.416	34.719	2412.	2295.	*	452.3	27.6	2172.5	94.9	8.881	25.8	2182.3	86.9	12.837	7.892	0.894	-18.9	-47.8
122	4767	1.418	34.718	2414.	2318.	*	587.1	38.2	2191.6	88.1	8.844	29.4	2281.2	88.4	14.815	7.853	0.919	-17.6	-53.8
124	4787	1.428	34.718	2412.	2298.	*	472.1	28.1	2176.5	93.3	8.872	26.4	2186.3	85.3	13.139	7.881	0.868	-13.8	-49.3
123	4787	1.428	34.728	2416.	2385.	*	483.2	28.8	2184.4	91.8	8.864	27.8	2194.1	83.9	13.487	7.873	0.854	-14.4	-58.7

111

110

CARBONATE REPORT

GEOSECS	INDIAN	STATION	CAST	DATE	TIME	LATITUDE	LONGITUDE	BOT DEPTH
		433	1	18 4 78	0800	23 0.1 S	74 1.0 E	4161
		433	3	18 4 78	0709	23 1.5 S	73 59.6 E	
		433	5	18 4 78	1201	23 1.0 S	74 2.0 E	
		433	6	18 4 78	1435	23 2.9 S	74 3.6 E	4272
		433	8	19 4 78	0430	23 2.3 S	73 59.9 E	

GC TCO2 VALUES ARE NOT USED FOR COMPUTATION TCO2=TCO2-15 (UM/KG)

MEASURED PARAMETERS										CALC. PARAMETERS P-T=INSITU									
SAMP NO	DEPTH (M)	TEMP. (C)	SAL. (P/1000)	TALK (E-6)	TIT TCO2* (E-6)	GC TCO2 (E-6)	PCO2 (ATM) (E-6)	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	H2CO3 (M/KG) (E-6)	HCO3- (M/KG) (E-6)	CO3= (M/KG) (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (M/KG) (E-6)	DELTA CO3= (M/KG) (E-6)
513	7	24.788	35.528	2331.	1974.	*	316.9	9.8	1713.7	251.2	8.277	9.8	1713.8	251.2	5.295	8.277	2.616	286.0	185.6
514	7	24.788	35.525	2328.	1972.	*	317.7	9.8	1712.4	258.6	8.276	9.8	1712.4	258.5	5.382	8.276	2.689	285.3	184.9
515	29	24.791	35.529	2327.	1975.	*	323.1	9.2	1716.8	247.8	8.278	9.2	1718.1	247.7	5.384	8.269	2.588	282.4	182.0
516	77	21.869	35.692	2339.	2087.	*	387.1	9.6	1764.6	232.8	8.279	9.6	1764.8	232.6	5.286	8.277	2.434	186.0	166.3
517	144	18.177	35.724	2345.	2044.	*	316.9	18.8	1822.3	211.8	8.262	18.7	1822.6	218.6	5.528	8.257	2.286	164.3	143.6
518	193	15.987	35.559	2336.	2060.	*	335.8	12.1	1867.6	188.2	8.236	12.1	1868.1	187.8	5.898	8.229	1.958	141.0	128.1
519	245	14.649	35.453	2333.	2074.	*	329.1	12.4	1879.8	181.7	8.239	12.4	1880.4	181.2	5.886	8.238	1.983	133.9	112.9
520	294	13.278	35.258	2319.	2084.	*	346.5	13.7	1984.6	169.7	8.214	13.6	1985.3	165.1	6.251	8.284	1.785	117.4	95.2
521	384	12.186	35.115	2313.	2088.	*	346.1	14.1	1915.1	158.8	8.211	14.1	1915.9	158.8	6.345	8.198	1.626	109.6	88.2
522	453	11.933	35.835	2318.	2093.	*	358.6	14.6	1924.8	153.6	8.204	14.5	1925.8	152.6	6.487	8.188	1.568	103.7	92.1
523	523	10.851	34.944	2307.	2184.	*	366.5	15.6	1943.8	144.6	8.186	15.5	1945.8	143.5	6.814	8.167	1.478	94.0	72.3
524	593	10.352	34.888	2381.	2111.	*	384.8	16.7	1958.8	136.3	8.165	16.6	1959.3	135.2	7.191	8.143	1.392	85.2	63.2
313	696	9.174	34.723	2297.	2126.	*	488.3	18.4	1983.8	124.6	8.138	18.3	1984.5	123.3	7.718	8.112	1.255	72.4	58.1
314	785	7.981	34.587	2295.	2141.	*	426.6	20.1	2085.1	114.7	8.117	19.9	2087.8	113.3	8.169	8.888	1.149	61.6	39.1
315	859	6.522	34.485	2298.	2169.	*	479.8	23.8	2045.4	99.8	8.067	23.5	2047.1	98.4	9.246	8.834	0.994	45.9	23.1
316	929	5.538	34.437	2385.	2184.	*	485.6	24.9	2063.2	95.8	8.868	24.6	2065.1	94.3	9.458	8.825	0.952	41.2	18.2
317	1028	4.653	34.454	2328.	2229.	*	573.2	38.5	2112.8	81.7	7.952	38.1	2114.7	80.2	11.164	7.952	0.818	26.3	3.8
318	1122	4.148	34.525	2348.	2258.	*	638.6	34.8	2148.3	75.7	7.956	33.5	2158.4	74.1	12.244	7.912	0.758	19.2	-4.4
319	1228	3.849	34.568	2348.	2269.	*	648.7	34.9	2159.8	74.3	7.958	34.4	2162.1	72.5	12.941	7.982	0.735	16.8	-7.1
320	1319	3.573	34.686	2358.	2288.	*	643.3	35.4	2178.6	74.8	7.949	34.8	2173.8	72.1	12.694	7.896	0.732	15.9	-9.5
321	1443	3.279	34.644	2356.	2287.	*	634.2	35.3	2177.1	74.6	7.955	34.7	2179.8	72.5	12.671	7.897	0.736	14.9	-9.8
322	1566	3.168	34.689	2385.	2298.	*	599.1	33.5	2175.8	79.8	7.978	32.8	2178.8	76.4	12.128	7.916	0.777	17.6	-7.3
323	1687	2.989	34.711	2388.	2295.	*	685.9	34.1	2183.3	77.9	7.974	33.3	2186.3	75.4	12.396	7.987	0.767	15.3	-9.9
181	1789	2.794	34.716	2388.	2294.	*	596.5	33.8	2182.8	78.3	7.979	33.8	2185.4	75.6	12.356	7.988	0.778	14.6	-11.8
324	1810	2.733	34.716	2383.	2284.	*	542.2	38.8	2168.3	84.9	8.818	38.8	2171.3	82.1	11.323	7.946	0.835	38.8	-4.8
182	1989	2.449	34.721	2385.	2287.	*	541.2	31.8	2171.5	84.4	8.818	38.2	2175.4	81.3	11.518	7.939	0.828	18.3	-7.9
183	2189	2.151	34.723	2385.	2293.	*	519.8	38.1	2166.4	86.4	8.833	29.3	2178.8	82.9	11.332	7.946	0.844	17.8	-9.8
184	2386	1.934	34.728	2388.	2274.	*	499.9	29.2	2156.4	88.4	8.846	28.3	2161.1	84.6	11.183	7.951	0.861	17.4	-18.1
185	2536	1.818	34.729	2378.	2271.	*	493.3	29.0	2153.2	88.8	8.851	28.8	2158.3	84.7	11.222	7.958	0.863	15.9	-12.1
186	2683	1.722	34.732	2376.	2269.	*	498.9	28.9	2151.3	88.8	8.852	27.9	2156.7	84.4	11.346	7.945	0.868	13.9	-14.5
187	2833	1.628	34.736	2379.	2275.	*	588.8	29.6	2158.1	87.3	8.844	28.5	2163.7	82.7	11.719	7.931	0.843	18.5	-18.4
188	2978	1.538	34.733	2381.	2276.	*	495.8	29.4	2158.8	87.8	8.848	28.3	2164.7	83.8	11.769	7.929	0.845	9.1	-28.4
189	3138	1.476	34.738	2387.	2277.	*	479.6	28.5	2157.8	98.6	8.862	27.3	2164.2	85.5	11.551	7.937	0.878	9.8	-28.2
118	3277	1.451	34.738	2391.	2281.	*	488.3	28.6	2161.7	98.7	8.862	27.4	2168.3	85.3	11.718	7.931	0.869	7.8	-22.7
111	3422	1.433	34.726	2395.	2282.	*	471.3	28.1	2161.5	92.5	9.878	26.8	2168.4	86.8	11.645	7.934	0.883	7.5	-23.6
112	3574	1.423	34.725	2399.	2288.	*	478.7	28.5	2168.8	91.5	9.865	27.2	2175.3	85.5	11.962	7.922	0.871	4.3	-27.3
114	3781	1.423	34.724	2408.	2288.	*	475.6	29.4	2167.6	92.8	8.867	26.9	2173.3	85.7	12.115	7.917	0.873	1.8	-38.5
115	3845	1.427	34.724	2484.	2292.	*	477.2	28.4	2171.4	92.2	8.867	27.8	2179.2	85.8	12.285	7.913	0.873	1.8	-31.6
116	3944	1.435	34.723	2484.	2295.	*	487.3	29.8	2175.4	98.6	8.858	27.5	2183.4	84.1	12.559	7.981	0.856	-2.8	-35.8
118	4818	1.441	34.723	2483.	2292.	*	488.8	28.6	2171.9	91.5	8.864	27.1	2188.8	84.9	12.463	7.984	0.864	-2.1	-35.3
117	4811	1.441	34.724	2486.	2287.	*	455.8	27.1	2164.8	95.9	8.886	25.6	2172.3	89.8	11.842	7.927	0.886	2.8	-31.2
119	4859	1.442	34.723	2485.	2293.	*	484.2	28.8	2175.1	91.1	8.861	27.3	2183.3	84.4	12.612	7.899	0.859	-3.3	-36.7
120	4889	1.445	34.723	2482.	2296.	*	497.1	29.6	2177.5	88.9	8.858	28.8	2185.7	82.3	12.975	7.887	0.837	-5.8	-39.3
121	4113	1.446	34.723	2487.	2298.	*	461.4	27.5	2167.7	94.8	8.881	26.8	2176.2	87.8	12.184	7.917	0.894	-8.6	-34.2
122	4133	1.448	34.723	2485.	2296.	*	487.4	29.8	2176.5	98.5	8.859	27.5	2184.8	83.7	12.775	7.894	0.852	-5.8	-38.6
124	4148	1.449	34.724	2485.	2292.	*	474.2	28.2	2171.1	92.7	8.869	26.7	2179.6	85.7	12.468	7.984	0.873	-3.2	-36.9
123	4158	1.449	34.724	2488.	2293.	*	493.1	29.4	2174.3	89.4	8.853	27.8	2182.6	82.6	12.961	7.887	0.841	-6.3	-48.1

GEODESICS (INDIAN) STATION CAST DATE TIME LATITUDE LONGITUDE 90T DEPTH
 454 1 21 4 78 8806 26 59.7 S 67 5.9 E 4973
 454 3 21 4 78 8741 27 2.8 S 67 5.3 E 5114

GC TC02 VALUES ARE NOT USED FOR COMPUTATION TC02=TC02-15 (UM/MKG)

MEASURED PARAMETERS					CALC. PARAMETERS P.=1ATH.T=INSITU*					CALC. PARAMETERS P.T=INSITU										
SAMP	DEPTH (M)	TEMP. (C)	SAL. (0/00)	TALK (E0/MKG)	TIT (E-6)	GC TC02 (M/KG)	TC02 (E-6)	PC02 (ATM) (M/KG)	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	H2CO3 (E-6)	HC03- (E-6)	CO3= (E-6)	PH	PH	ICP (E-6)	DELTA CO3= (CALC) (M/KG)	DELTA CO3= (ARRG) (M/KG)
381	1	24.497	35.513	2329.	1974.	*	*	314.9	9.8	1715.3	249.6	8.279	9.8	1715.3	249.6	3.266	8.279	2.599	284.4	184.1
382	1	24.497	35.589	2327.	1974.	*	*	317.2	9.1	1716.7	248.2	8.278	9.1	1718.7	248.2	3.308	8.276	2.584	283.8	182.7
383	25	24.458	35.945	2329.	1977.	*	*	319.3	9.2	1728.2	247.7	8.273	9.2	1728.2	247.6	3.338	8.273	2.588	282.3	181.9
384	78	24.187	35.595	2335.	1981.	*	*	319.8	9.1	1722.9	249.8	8.278	9.1	1723.1	248.8	3.298	8.276	2.596	283.2	182.7
385	118	19.481	35.573	2335.	2023.	*	*	313.7	18.3	1793.9	218.8	8.268	18.3	1794.2	218.5	3.438	8.265	2.279	172.4	151.8
388	168	17.662	35.598	2336.	2856.	*	*	339.3	11.7	1847.3	197.8	8.236	11.7	1847.7	196.6	3.884	8.238	2.851	158.1	129.3
387	228	15.301	35.523	2335.	2869.	*	*	336.7	12.2	1869.8	187.8	8.234	12.2	1870.3	186.5	3.939	8.226	1.342	139.5	118.6
388	273	14.414	35.481	2338.	2898.	*	*	358.7	13.6	1986.7	169.7	8.286	13.6	1987.3	169.1	6.359	8.197	1.794	121.6	188.9
389	368	13.248	35.267	2328.	2895.	*	*	365.7	14.4	1921.1	155.5	8.195	14.4	1922.8	158.7	6.582	8.182	1.648	118.5	92.2
318	461	12.189	35.184	2319.	2182.	*	*	362.3	14.8	1933.1	154.8	8.195	14.7	1934.2	153.1	6.628	8.179	1.575	184.2	32.6
311	545	11.433	35.819	2389.	2186.	*	*	376.9	15.9	1945.4	144.8	8.177	15.7	1946.6	143.7	6.962	8.157	1.475	94.2	72.4
312	619	10.773	34.934	2383.	2115.	*	*	397.6	17.8	1962.6	135.4	8.154	16.9	1964.8	134.2	7.398	8.131	1.374	84.8	62.8
313	782	10.169	34.851	2388.	2116.	*	*	395.3	17.3	1965.8	132.7	8.154	17.1	1967.6	131.3	7.443	8.128	1.342	88.5	58.3
314	777	9.288	34.735	2381.	2119.	*	*	384.4	17.3	1978.5	131.2	8.162	17.1	1972.2	129.7	7.351	8.134	1.328	78.2	55.7
315	852	8.488	34.648	2388.	2134.	*	*	489.4	18.9	1993.6	121.4	8.136	18.7	1995.4	115.9	7.871	8.104	1.217	67.7	45.1
318	924	7.147	34.525	2299.	2162.	*	*	466.3	22.6	2035.8	184.4	8.081	22.3	2036.9	182.8	8.999	8.046	1.841	58.8	27.1
317	1022	5.779	34.441	2385.	2181.	*	*	483.4	24.6	2059.4	97.8	8.063	24.2	2061.5	95.3	9.471	8.024	0.962	41.5	18.3
318	1117	4.661	34.427	2319.	2287.	*	*	587.9	26.9	2089.5	96.8	8.041	26.5	2091.7	98.8	10.846	7.998	0.896	34.1	18.9
319	1222	4.887	34.468	2329.	2232.	*	*	558.8	38.2	2118.9	82.9	8.083	39.7	2121.3	81.1	11.882	7.955	0.819	25.4	1.9
320	1318	3.738	34.518	2345.	2258.	*	*	599.1	32.8	2147.1	78.1	7.976	32.3	2149.5	76.2	11.911	7.924	0.771	19.6	-4.5
321	1415	3.428	34.568	2349.	2285.	*	*	687.9	33.7	2154.8	76.8	7.969	33.1	2157.2	74.7	12.289	7.913	0.757	17.2	-7.2
322	1528	3.895	34.612	2359.	2266.	*	*	564.8	31.6	2153.8	81.4	7.999	31.8	2155.9	79.8	11.515	7.939	0.882	28.5	-4.3
323	1646	2.859	34.643	2357.	2272.	*	*	593.7	33.5	2161.2	77.3	7.978	32.9	2164.3	74.9	12.248	7.912	0.768	15.2	-18.8
324	1783	2.637	34.669	2366.	2275.	*	*	567.8	32.3	2162.2	88.5	7.997	31.6	2163.6	77.8	11.864	7.926	0.791	16.8	-8.8
181	1792	2.656	34.667	2368.	2273.	*	*	581.9	33.1	2161.6	78.3	7.985	32.4	2163.8	75.7	12.191	7.914	0.769	14.6	-11.8
182	1989	2.299	34.788	2372.	2272.	*	*	525.7	38.3	2156.6	85.1	8.025	29.5	2158.5	82.8	11.297	7.947	0.834	18.9	-7.3
183	2185	2.869	34.717	2381.	2298.	*	*	528.6	38.3	2163.9	85.8	8.031	29.4	2168.2	82.4	11.377	7.944	0.838	17.3	-9.6
184	2384	1.918	34.724	2388.	2291.	*	*	542.2	31.7	2176.4	82.8	8.015	38.7	2181.1	79.2	12.838	7.928	0.886	12.8	-15.9
185	2583	1.848	34.724	2388.	2286.	*	*	514.9	38.2	2169.3	86.5	8.035	29.2	2174.4	82.4	11.678	7.933	0.839	13.8	-15.1
186	2783	1.771	34.724	2391.	2283.	*	*	492.6	29.8	2164.4	89.7	8.053	27.9	2178.8	85.1	11.411	7.943	0.867	13.5	-15.3
187	2979	1.739	34.725	2391.	2284.	*	*	495.6	29.2	2165.7	89.2	8.051	28.8	2171.6	84.3	11.689	7.932	0.858	18.5	-19.8
188	3177	1.787	34.725	2392.	2293.	*	*	524.8	38.9	2177.8	85.8	8.028	29.7	2183.3	88.8	12.552	7.981	0.815	3.8	-26.3
189	3378	1.667	34.724	2394.	2285.	*	*	488.3	28.8	2165.9	98.3	8.057	27.6	2172.7	84.8	11.956	7.922	0.863	6.1	-24.7
118	3577	1.632	34.723	2393.	2289.	*	*	585.8	29.9	2171.5	87.6	8.043	28.5	2178.6	81.9	12.576	7.988	0.834	8.7	-38.8
111	3775	1.597	34.722	2398.	2294.	*	*	532.7	31.6	2179.8	83.4	8.021	38.1	2186.4	77.5	13.491	7.878	0.785	-6.2	-38.5
112	3975	1.578	34.721	2391.	2289.	*	*	518.2	38.2	2172.3	86.5	8.039	28.7	2188.1	88.2	13.193	7.888	0.816	-6.3	-39.3
114	3982	1.577	34.722	2391.	2298.	*	*	514.5	38.5	2173.4	86.1	8.035	28.9	2181.3	79.8	13.388	7.876	0.812	-6.8	-39.8
116	4281	1.588	34.728	2391.	2295.	*	*	532.7	31.6	2188.8	83.4	8.021	29.9	2188.2	76.9	14.831	7.853	0.782	-12.7	-46.6
115	4282	1.588	34.721	2391.	2289.	*	*	518.4	38.2	2172.2	86.5	8.038	28.6	2188.5	79.8	13.488	7.878	0.813	-9.7	-43.7
117	4458	1.683	34.722	2391.	2287.	*	*	583.7	29.8	2169.6	87.6	8.044	28.1	2178.4	88.4	13.628	7.866	0.819	-12.7	-47.6
119	4598	1.618	34.728	2391.	2298.	*	*	514.7	38.5	2173.5	86.8	8.035	28.7	2182.6	78.7	14.887	7.851	0.881	-16.6	-52.1
118	4598	1.618	34.721	2392.	2284.	*	*	498.2	29.8	2165.3	89.7	8.055	27.3	2174.5	82.2	13.451	7.871	0.837	-13.1	-48.6
120	4699	1.627	34.721	2388.	2298.	*	*	525.9	31.1	2174.4	84.5	8.026	29.3	2183.6	77.1	14.528	7.838	0.785	-19.7	-55.6
121	4748	1.631	34.721	2391.	2285.	*	*	497.3	29.4	2166.9	88.6	8.049	27.6	2176.4	81.8	13.828	7.959	0.824	-16.6	-52.7
122	4798	1.636	34.728	2392.	2287.	*	*	588.9	29.6	2169.3	88.1	8.046	27.8	2178.8	88.4	13.981	7.854	0.818	-18.8	-54.2
124	4829	1.639	34.721	2391.	2286.	*	*	588.8	29.6	2168.3	88.1	8.046	27.8	2177.9	88.3	14.023	7.853	0.818	-18.5	-54.9
323	1646	2.859	34.643	2357.	2272.	*	*	593.7	33.5	2161.2	77.3	7.978	32.9	2164.3	74.9	12.248	7.912	0.768	15.2	-18.8
324	1783	2.637	34.669	2366.	2275.	*	*	567.8	32.3	2162.2	88.5	7.997	31.6	2163.6	77.8	11.864	7.926	0.791	16.8	-8.8
181	1792	2.656	34.667	2368.	2273.	*	*	581.9	33.1	2161.6	78.3	7.985	32.4	2163.8	75.7	12.191	7.914	0.769	14.6	-11.8
182	1989	2.299	34.788	2372.	2272.	*	*	525.7	38.3	2156.6	85.1	8.025	29.5	2158.5	82.8	11.297	7.947	0.834	18.9	-7.3
183	2185	2.869	34.717	2381.	2288.	*	*	528.6	38.3	2163.9	85.8	8.031	29.4	2168.2	82.4	11.377	7.944	0.838	17.3	-9.6
184	2384	1.918	34.724	2388.	2291.	*	*	542.2	31.7	2176.4	82.8	8.015	38.7	2181.1	79.2	12.838	7.928	0.886	12.8	-15.9
185	2583	1.848	34.724	2388.	2288.	*	*	514.9	38.2	2169.3	86.5	8.035	29.2	2174.4	82.4	11.678	7.933	0.839	13.8	-15.1
186	2783	1.771	34.724	2391.	2283.	*	*	492.6	29.8	2164.4	89.7	8.053	27.9	2178.8	85.1	11.411	7.943	0.867	13.5	-15.3
187	2979	1.739	34.725	2391.	2284.	*	*	495.6	29.2	2165.7	89.2	8.051	28.8	2171.6	84.3	11.689	7.932	0.858	18.5	-19.8
188	3177	1.787	34.725	2392.	2293.	*	*	524.8	38.9	2177.8	85.8	8.028	29.7	2183.3	88.8	12.552	7.981	0.815	3.8	-26.3
189	3378	1.667	34.724	2394.	2285.	*	*	488.3	28.8	2165.9	98.3	8.057	27.6	2172.7	84.8	11.956	7.922	0.863	6.1	-24.7
118	3577	1.632	34.723	2393.	2289.	*	*	585.8	29.9	2171.5	87.6	8.043	28.5	2178.6	81.9	12.576	7.988	0.834	8.7	-38.8
111	3775	1.597	34.722	2398.	2294.	*	*	532.7	31.6	2179.8	83.4	8.021	38.1	2186.4	77.5	13.491	7.878	0.785	-6.2	-38.5
112	3975	1.578	34.721	2391.	2289.	*	*	518.2	38.2	2172.3	86.5	8.039	28.7	2188.1	88.2	13.193	7.888	0.816	-6.3	-39.3
114	3982	1.577	34.722	2391.																