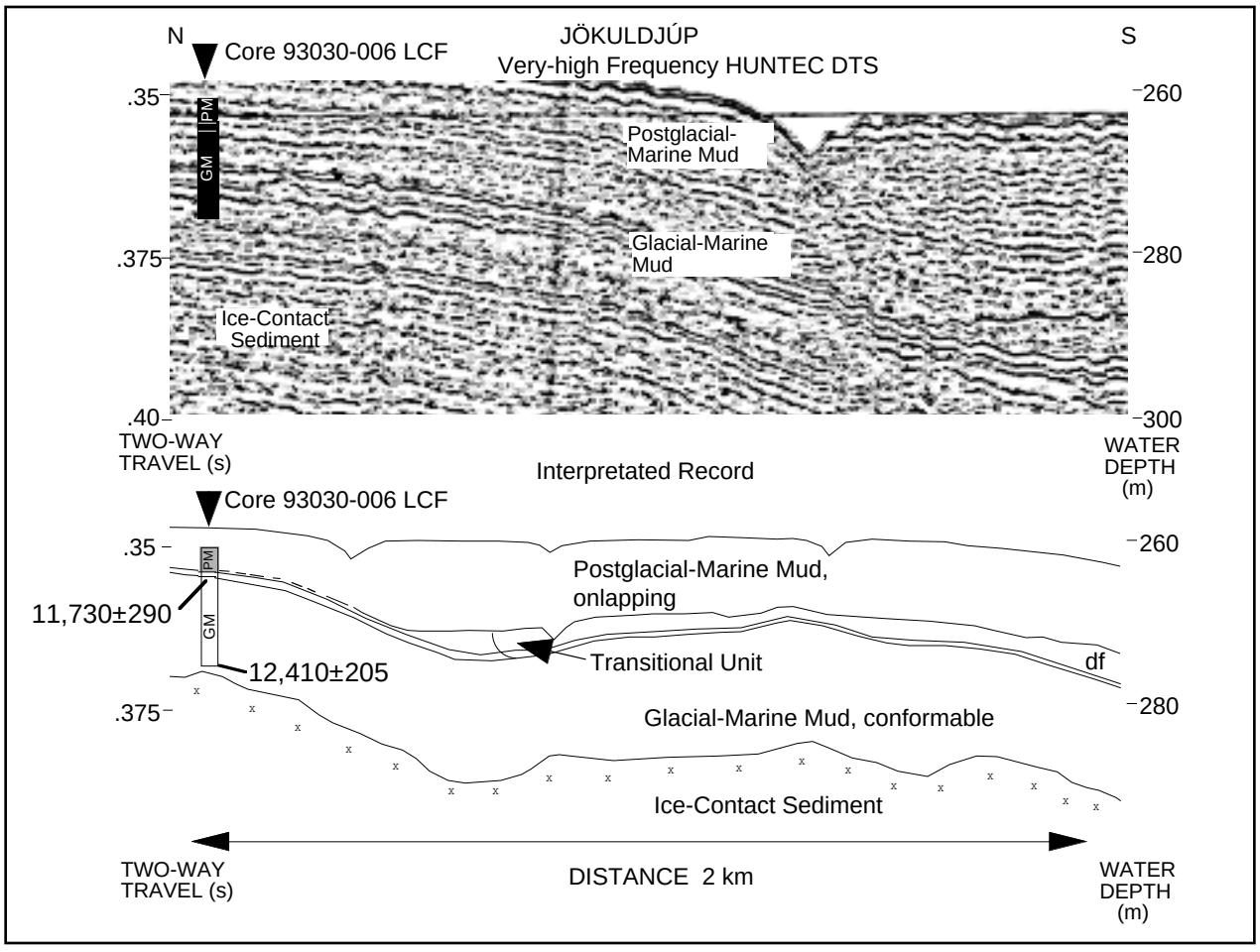
Radiocarbon Date List IX: Antarctica, Arctic Ocean, and the Northern North Atlantic

Compiled by L. Micaela Smith and Kathy J. Licht



High-resolution seismic reflection profile with interpretation from the SW Iceland Shelf, Jökuldjúp.

Contributors: A.E. Aksu, J.B. Anderson, J.T. Andrews, D.C. Barber, S. Cartee-Schoolfield, W. Cunningham, L. Doner, A. Geirsdóttir, S. Hagen, M. Hald, F. Hall, J. Hardardóttir, G. Helgadóttir, E. James, A.E. Jennings, G.B. Kristjánsdóttir, A. Leventer, K. Licht, P. Perry, L. Phillips, L.M. Smith, A. Sveinbjörnsdóttir

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RADIOCARBON DATE LIST IX: ANTARCTICA, ARCTIC OCEAN, AND THE NORTHERN NORTH ATLANTIC REGION

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ABSTRACT

This Date List contains an annotated listing of 385 radiocarbon dates determined on samples from the marine environments of Antarctic, Arctic Ocean, northern North Atlantic, Icelandic Lakes, and Colorado. Samples were submitted by people affiliated with INSTAAR's Micropaleontology Lab under the direction of Drs. John T. Andrews and Anne E. Jennings. Nearly all of the dates are from marine cores on acid-insoluble organic material, shells, and foraminifera. All of the dates were obtained by the Accelerator Mass Spectrometry (AMS) method. Regions of concentrated research include: the Ross Sea, the Weddell Sea, the Beaufort Sea, Hudson Strait, Baffin Bay, the Labrador Shelf and Sea, East Greenland fjords and shelf, the Denmark Strait, Iceland Plateau, the southwestern and northwestern Iceland Shelves. The three non-marine radiocarbon dates are from lake sediments in Iceland and on a gastropod from an outcrop in Colorado. The radiocarbon dates have been used to address a variety of research questions including timing of the environmental changes including glacier advance and retreat, the appropriateness of commonly adopted marine reservoir corrections, and testing the validity of acid-insoluble organic dates for Antarctica. Thus, most of the dates constrain the timing, rate, and interaction of late Quaternary paleoenvironmental fluctuations in sea level, glacier extent, sediment input, and changes in ocean circulation patterns. Stratigraphic and sample contexts are presented for each core to document the basis for interpretations.

PREFACE

Radiocarbon Date List IX, INSTAAR Occasional Paper 54, is the latest in a series of radiocarbon date lists that has been published through the Institute of Arctic and Alpine Research. Normally radiocarbon date lists are produced by individual radiocarbon laboratories or for individual research projects. In contrast, the date lists compiled and published by INSTAAR have historically presented the results from several radiocarbon laboratories and research projects that relate to one or more Arctic and Antarctic regions. With the advancement of accelerator mass spectrometry (AMS) ^{14}C dating**,** and its reduced costs for large research projects, the number of measured radiocarbon dates has greatly increased. Thus, for simplicity sake, this date list includes only those from INSTAAR's Micropaleontology Laboratory, supervised by Professor John T. Andrews and Dr. Anne E. Jennings. The research at INSTAAR's Micropaleontology Laboratory has shifted its primary focus from the terrestrial record to the marine record of glaciation in the North Atlantic region, the Arctic Ocean, and Antarctica. Thus, most of the dates reported here were collected from marine sediment cores.

This Date List follows the protocol for archiving data set forth by the National Science Foundation. This date list is available in both paper and electronic format via the world wide web at http://instaar.colorado.edu. L. Micaela Smith and Kathy Licht are congratulated for compiling such an exhaustive database.

James P. M. Syvitski
Director, INSTAAR

ACKNOWLEDGEMENTS

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INTRODUCTION

This Radiocarbon Date List is the ninth in a series that reports radiocarbon analyses obtained by researchers at the University of Colorado, Institute of Arctic and Alpine Research (INSTAAR) and at other institutions with shared interest in the Arctic and Antarctic. This date list represents only those dates obtained by the Micropaleontology Laboratory by Drs. John T. Andrews and Anne E. Jennings, their students, and colleagues because of the sharp increase in the number of radiocarbon dates generated by members of INSTAAR. Of the dates within, the majority are on materials recovered from marine cores recovered from Antarctica, the Arctic Ocean and the northern North Atlantic region, with only 2 dates from Icelandic lake cores, and 1 date from a terrestrial exposure in Colorado. This is the first Date List in which all of the ages were determined using Accelerator Mass Spectrometry (AMS).

AMS dates are routinely measured on carbonate samples as small as 2 mg of total carbonate and 1 mg of C for the acid-insoluble organic (AIO) fraction of sediment. AMS technology has enabled high-resolution time-series of environmental conditions, especially in marine and lacustrine settings. The ability to date small samples has allowed us to keep our sampling intervals small (<2 cm), even in sediments that have approximately only 1% biogenic carbonate, as is commonly the case in East Greenland sediments. We have also begun to recognize the usefulness of radiocarbon dates on sediment gravity flow deposits, in as much as they date the age of the remobilized sediments, although they do not date the actual timing of the event itself. For the marine work on the Iceland continental shelf, we are able to test the marine reservoir effect and establish chronological ties between marine and terrestrial records using tephra deposits. Dating of Antarctic materials has allowed us to place chronological constrains on the timing of ice sheet advance and retreat in the Ross Sea and to assess the quality of AIO dates.

This Date List reflects a continued expansion in geographic focus of the researchers and students in the Micropaleontology Laboratory. For the first time, dates from the Arctic Ocean, Icelandic Lakes, and Colorado are included in an INSTAAR date list. The research in the Antarctic and on the continental margins adjacent to the Denmark Strait has greatly expanded in the past several years, as members of our lab have participated in two cruises to each of these areas in the mid 1990's.

Specifics of Reporting Radiocarbon Dates

As with the previous date list, this document presents two types of radiocarbon ages: "Reported" and "Corrected". Reported ages are those issued by the radiocarbon laboratory. Since the mid-1970's, most labs have followed the approach of Stuiver and Pollach (1977) for reporting "conventional radiocarbon dates". In this approach, reported dates should be without a marine-reservoir correction, with sample errors of ±1 standard deviation, and specifically corrected for $\delta^{13}C$ sample fractionation, normalized to a standard $\delta^{13}C$ of -25‰. However, a few radiocarbon labs have not adopted this convention (e.g., the GSC). For further details see Appendix 3 in Manley and Jennings, 1996.

'Corrected' dates are also presented in this publication and usually represent a correction for the marine reservoir effect (the reported age minus the marine reservoir effect). Except where otherwise stated and for dates from Eastern Canada and the Iceland Plateau, this effect is assumed to be 450 years; however, for the East Greenland shelf and the Denmark Strait the correction is 550 years, for Iceland, the Snorri Drift, and the Iceland Slope it is 400 years, and for Antarctica it is assumed to be 1200 years (cf. Hjort, 1973; Mangerud and Gulliksen, 1975; Gordon and Harkness, 1992; Berkman and Forman, 1996). Dating of the acid-insoluble fraction of Antarctic surface sediments indicates that the ages are significantly older than the expected 1200 years. Thus, in cores where the surface age is known, the value of the surface age is subtracted from subsequent dates in that particular core

(Andrews et al., 1999). Antarctic dates that do not show a corrected age do not have reliable surface age value or are from a different lithofacies than the surface sediment. The appropriate marine reservoir for a given region continue to be refined as our knowledge of the temporal and spatial patterns in the apparent age of seawater advance (e.g., Barber et al., 1999). Corrected dates are not listed for non-marine samples.

Guide to this Date List

Closely following the format of the previous date list (Manley and Jennings, 1996), this report is divided into three parts. Part 1 presents radiocarbon dates from marine sediment cores. Part 2 consists of dates from the Icelandic lake sediment cores, and Part 3 lists the date from Colorado. Within each Part, dates are arranged alphabetically by region. Within each region, dates are listed by core number (alphabetically). Location information is presented only once for each core or site, including latitude, longitude, and water depth (for marine cores), lake surface elevation (for lake cores), or site elevation (for terrestrial sites). Latitude/longitude values follow the convention that positive values are north latitude and east longitude, whereas negative values are south latitude and west longitude.

Marine core names contain prefixes and suffixes that describe the core. The prefix is typically the cruise identifier, including vessel abbreviation, cruise number, and year, and the suffix describes the type of core or sampler used: BC, box core; GC, gravity core; GGC, giant gravity core; KC, kasten core; PC, piston cores; LCF, large-diameter long coring facility piston core; and TWC OR TC, trigger-weight core. For example, core NBP9501-39KC was collected by the Nathaniel B. Palmer in 1995 on cruise 01 of the season. The core number is 39, and was collected using a kasten corer.

For each date, we report the following, if applicable:

- Reported radiocarbon date and analytical uncertainty (in radiocarbon years BP)
- Radiocarbon laboratory number (see Table 1 for explanation of abbreviations)
- Corrected radiocarbon age, and the same analytical uncertainty for the reported age
- GRL- numbers (laboratory numbers for the Sedimentology Laboratory at INSTAAR)

- Sample depth in the core, or sample height at the outcrop
- The person or persons who obtained the date for their research and contributed it to the date list for reporting
- Type of material dated
- Species of carbonate, including genus and species, when known
- Sample weight, in mg
- whether the $\delta^{13}C$ was measured or assumed, and its value if measured
- Sample notes, including a detailed species list for foraminifera samples, description of sample preservation and preparation (for foraminifera, unless where otherwise noted, samples were prepared by washing sediment over a 63 μm sieve with distilled water; foraminifera were then picked from air-dried sand, usually from the >106 μm fraction)
- Stratigraphic relations (geologic context of either the sample, or the entire core)
- Significance (any significant result pertaining to this specific date)
- Core Summary (an interpretive discussion of the significance of the date, or group of dates, commonly with reference to published articles or to other dates that bear on the interpretation)
- References

Two appendices conclude the report. Appendix 1A is an index to the dates presented here, arranged by radiocarbon-laboratory number. Dates have also been arranged by location in Appendix IB and are listed alphabetically by core name and sample depth. Appendix 2 is a comprehensive list of dates that have appeared in this and previous INSTAAR date lists, arranged by laboratory number in Appendix 2A and by increasing age in Appendix 2B.

Preparation of this Date List was facilitated by a Filemaker Pro database originally configured by D. Kaufman. The database contains all of the dates presented in Appendix 2 and in previous INSTAAR date lists. For further information on the program, or to obtain a copy, contact L. Micaela Smith or Dr. John T. Andrews (INSTAAR). For the first time, the database will be available on-line, http://instaar.colorado.edu.

Table 1. Abbreviations of radiocarbon dating laboratories included in this and previous INSTAAR Date Lists; those included in the current Date List are indicated by an asterisk (*).

AA*	.....	NSF-University of Arizona AMS Facility
AAR*	.....	University of Aarhus, Denmark
AECV	.....	Alberta Environmental Centre, University of Alberta
Beta	.....	Beta Analytic Inc.
BGS	.....	Brock University, Canada
Birm	.....	Birmingham University, U.K.
CAMS*	.....	Center for AMS at Lawrence Livermore National Laboratory
DIC	.....	Dicarbon Corp.
GaK	.....	Gakushuin University, Japan
Gif	.....	Gif-sur-Yvette, Centre des Faibles Radioactivities, France
GSC	.....	Geological Survey of Canada Radiocarbon Dating Laboratory
GX	.....	Geochron Inc.
I	.....	Isotopes (Teledyne) Inc.
L	.....	Lamont-Dougherty Geological Observatory
NSRL* (OS)	.....	INSTAAR Radiocarbon Laboratory, samples run at Woods Hole
QC	.....	Queens College, New York
QL	.....	Quaternary Isotopes Laboratory, University of Washington
Qu	.....	Quebec Department of Natural Resources, Canada
S	.....	University of Saskatchewan, Canada
SI	.....	Smithsonian Institution
TO	.....	IsoTrace Radiocarbon Laboratory, University of Toronto
Y	.....	Yale University

ANTARCTICA

Central Ross Sea

Core: NBP9401-33PC

Location: central Ross Sea, outer continental shelf in a small basin
Lat.: -75˚ 35.424' **Long.:** -179˚ 40.56' **Depth (mwd):** -603

Lab. ID: AA - 21759 **GRL**-968-O **Depth (cm):** 1-3
Age: 4360 ± 50 **Corr. Age:** 0 ± 50 **Material:** Organic Concentrate
Weight (mg): 45.1
δ^{13}**C:** Measured δ^{13}**C (‰):** -29.4
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 45.1 mg
Significance: Gives age of surface organic sediment in the central Ross Sea. Site was probably not covered by grounded glacial ice during the LGM.

Lab. ID: AA - 26520 **GRL**-1020-O **Depth (cm):** 28-30
Age: 26040 ± 260 **Corr. Age:** 21680 ± 260 **Material:** Organic Concentrate
Weight (mg): 26.2
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon =26.2 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM. Date is corrected by the surface age from this core of 4360 (AA-21759).

Lab. ID: AA - 26521 **GRL**-1021-O **Depth (cm):** 35.5-37.5
Age: 23900 ± 210 **Corr. Age:** 19540 ± 210 **Material:** Organic Concentrate
Weight (mg): 24.1
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 24.1 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM Date is corrected by the surface age from this core of 4360 (AA-21759).

Lab. ID: AA - 26522 **GRL**-1022-O **Depth (cm):** 67-69
Age: 26300 ± 270 **Corr. Age:** 21940 ± 270 **Material:** Organic Concentrate
Weight (mg): 14.0
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 14.0 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM. Date is corrected by the surface age from this core of 4360 (AA-21759).

Lab. ID: AA - 26523 **GRL**-1023-O **Depth (cm):** 114-116

Age: 30310 ± 460 **Corr. Age:** 25950 ± 460 **Material:** Organic Concentrate
Weight (mg): 37.0
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 37.0 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM. Date is corrected by the surface age from this core of 4360 (AA-21759).

Lab. ID: AA - 23223 **GRL**-969-O **Depth (cm):** 135-138
Age: 39,305 ± 1155 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 95.1
δ^{13}**C:** Measured δ^{13}**C (‰):** -29.2
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 95.1 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM. Date is corrected by the surface age from this core of 4360 (AA-21759).

Lab. ID: AA - 21760 **GRL**-970-O **Depth (cm):** 163-165
Age: 33465 ± 570 **Corr. Age:** 29105 ± 570 **Material:** Organic Concentrate
Weight (mg): 42.4
δ^{13}**C:** Measured δ^{13}**C (‰):** -27.9
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 42.4 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM. Date is corrected by the surface age from this core of 4360 (AA-21759).

Stratigraphy: Core is gray mud with scattered pebbly layers.
Core Summary: (from Licht, 1999) The stratigraphy of this core is interpreted to represent open marine to sub-ice shelf deposition with interspersed debris flows or ice-rafting events. Only the upper 5 cm of 94-33 is green mud and the surface date there (4360 ^{14}C yrs) is consistent with surface ages in the region. The remaining dates exhibit age reversals; it is unclear if they represent primary, undisturbed sedimentation or multiple sediment gravity flows.
Reference: Licht, 1999

Core: NBP9401-36TC

Location: central Ross Sea, outer continental shelf, near mouth of seafloor trough
Lat.: -75˚ 49.35' **Long.:** -182˚ 46.56' **Depth (mwd):** -622

Lab. ID: AA - 21761 **GRL**-971-O **Depth (cm):** 9-11
Age: 13830 ± 90 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 118.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.6
Contributor: K. Licht

Sample Notes: estimated readily oxidizable organic carbon = 118.8 mg

Lab. ID: AA - 23224 **GRL**-972-O **Depth (cm):** 3-35
Age: 28055 ± 315 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 57.6
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.7
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 57.6 mg

Lab. ID: AA - 21762 **GRL**-973-O **Depth (cm):** 49-51
Age: 30510 ± 415 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 72.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.8
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 72.7 mg

Core Summary: Date is not reservoir corrected due to uncertainties with determining the proper value.

Core: NBP9401-36PC

Location: central Ross Sea, outer continental shelf, near mouth of seafloor trough
Lat.: -75˚ 49.35' **Long.:** -182˚ 46.56' **Depth (mwd):** -622

Lab. ID: AA - 21763 **GRL**-974-O **Depth (cm):** 6-8
Age: 26955 ± 340 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 72.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.8
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 72.7 mg
Significance: Date is not reservoir corrected due to uncertainties with determining the proper value.

Lab. ID: AA - 23225 **GRL**-975-O **Depth (cm):** 88-90
Age: 30,220 ± 420 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 118.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.5
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 118.8 mg
Significance: Date is not reservoir corrected due to uncertainties with determining the proper value.

Core Summary: (from Licht, 1999) The youngest date on this diamicton is 13.8 ^{14}C ka (uncorrected), which is substantially younger than all other AIO dates from diamictons in the CRS. Three possible interpretations are: (1) with a 4000 year correction (Andrews et

al., 1999), ice advanced across this site at ~9.8 ^{14}C ka, (2) the uncorrected date gives the age of ice advance, or (3) since the top ~10 cm of the core is sandier than the rest of the core, the top 10 cm of this diamicton may represent ice-proximal glacial marine sedimentation, thus the corrected date (9.8 ^{14}C ka) gives a minimum age of ice retreat. Based on sedimentological properties and appearance in X-radiographs, interpretation 3 is favored. The two underlying dates are interpreted to be derived from till and are consistent with the ages derived from the piston core. The youngest date from the piston core gives a maximum age of ice advance of ~23.0 ^{14}C ka.
Reference: Licht, 1999

Core: NBP9501-6PC

Location: central Ross Sea, outer continental shelf in a small basin
Lat.: -75˚ 29.88' **Long.:** -179˚ 21.6' **Depth (mwd):** -599

Lab. ID: AA - 26524 **GRL**-1024-O **Depth (cm):** 20-22
Age: 28660 ± 350 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 26.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.3
Contributor: K. Licht
Sample Notes: readily oxidizable organic carbon = 26.7 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM

Lab. ID: AA - 26525 **GRL**-1025-O **Depth (cm):** 72-74
Age: 27250 ± 290 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 22.3
δ^{13}**C:** Assumed δ^{13}**C (‰):** -25.0
Contributor: K. Licht
Sample Notes: readily oxidizable organic carbon = 22.3 mg
Significance: Site was probably not covered by grounded glacial ice during the LGM. Date is not reservoir corrected due to uncertainties with determining the proper value. Core can be correlated to core NBP9401-33PC.

Stratigraphy: Core is gray mud with scattered pebbly layers.
Core Summary: (from Licht, 1999) The stratigraphy of this core is similar to NBP9401-33PC and is interpreted to represent open marine to sub-ice shelf deposition with interspersed debris flows or ice-rafting events. The site was probably not covered by grounded glacial ice during the LGM. The dates are not reservoir corrected due to uncertainties with determining the proper value.
References: Licht, 1999

Core: NBP9501-7PC

Location: central Ross Sea, near continental shelf edge
Lat.: -75˚ 37.54' **Long.:** 178˚ 35.213' **Depth (mwd):** -449

Lab. ID: AA - 23405 **GRL**-987-O **Depth (cm):** 2-4
Age: 22,970 ± 210 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 24.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.1
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 24.3 mg
Significance: Dates from this core give age of grounded ice advance. Core has paired foraminifera and organic dates with many reversals.

Lab. ID: AA - 23418 **GRL**-1299-S **Depth (cm):** 2-4
Age: 21,980 ± 290 **Corr. Age:** 20,780 ± 290 **Material:** Benthic Foraminifera
Weight (mg): 3.2 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: K. Licht
Sample Notes: 28 *Globocassidulina biora*, 26 *Cibicides refulgens*, 16 *Cibicides grossepunctatus*
Significance: Dates from this core give age of grounded ice advance. Core has paired foraminifera and organic dates with many reversals.

Lab. ID: AA - 23406 **GRL**-988-O **Depth (cm):** 20-22
Age: 25,690 ± 300 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 31.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.0
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 31.3 mg
Significance: Dates from this core give age of grounded ice advance. Date is not reservoir corrected due to uncertainties with determining the proper value. Core has paired foraminifera and organic dates with many reversals.

Lab. ID: AA - 23417 **GRL**-1298-S **Depth (cm):** 20-22
Age: 17,590 ± 190 **Corr. Age:** 16,390 ± 190 **Material:** Benthic Foraminifera
Weight (mg): 4.9 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: K. Licht
Sample Notes: 54 *Globocassidulina biora*, 21 *Cibicides refulgens*
Significance: Dates from this core give age of grounded ice advance.

Lab. ID: AA - 23407 **GRL**-989-O **Depth (cm):** 63-66
Age: 20,780 ± 220 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 21.2
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.5
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 21.2 mg
Significance: Dates from this core give age of grounded ice advance.

Lab. ID: AA - 23222 **GRL**-1290-S **Depth (cm):** 63-66

Age: 14970 ± 140 **Corr. Age:** 13770 ± 140 **Material:** Benthic Foraminifera
Weight (mg): 3.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.8
Contributor: K. Licht
Sample Notes: 96 *Cibicides sp.*, 25 *Globocassidulina biora*
Significance: Dates from this core give age of grounded ice advance.

Stratigraphy: Top of core has some stratification and was probably initially deposited as glacial marine sediment, but core site is interpreted to have been overrun by grounded ice and is thus till.
Core Summary: (from Licht, 1999) The dated section of core NBP9501-7 is interpreted to be glacial marine sediment reworked by overriding glacier ice resulting in age reversals. The youngest date in this core of 13.8 ^{14}C ka was obtained on benthic foraminifera (*Globocassidulina biora* and *Cibicides sp*.) and indicates that conditions were sufficient for marine life to exist at that time; subsequently, the site was overrun by advancing ice. Since this core is located on the outer continental shelf, the data suggest that LGM ice reached its maximum position shortly after 13.8 ^{14}C ka. There is no evidence from the X-radiograph that this dated sediment has been remobilized as a debris flow. This date is much younger than the previously estimated ice maximum of 22 ^{14}C ka (e.g., Kellogg et al., 1996). Previous maximum estimates of 18-22 ^{14}C ka were suppositions because of the lack of chronological information.

Reference: Licht, 1999

Core: NBP9501-11PC

Location: central Ross Sea, in a seafloor trough
Lat.: -76˚ 27.170' **Long.:** 179˚ 5.176' **Depth (mwd):** -659

Lab. ID: AA - 23408 **GRL**-990-O **Depth (cm):** 3-5
Age: 6640 ± 110 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 40.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -26.6
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 40.3 mg
Significance: Date gives near surface sediment age.

Lab. ID: AA - 23409 **GRL**-991-O **Depth (cm):** 61-63
Age: 27,120 ± 300 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 37.9
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.7
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 37.9 mg
Significance: Since sediment is till, this date gives maximum age of ice advance. Date is not reservoir corrected due to uncertainties with determining the proper value. E. Domack (Hamilton College) has dates on the trigger core.

Core Summary: The near surface age of 6640 ^{14}C yrs is reasonable given the range of core top ages for this area (DeMaster et al., 1996; Andrews et al., 1999). The lowest date in the piston core of 23.1 ^{14}C ka (corrected) is interpreted to represent a maximum estimate of the age of ice advance over this site. E. Domack (Hamilton College) has dates on the trigger core.
Reference: Licht, 1999

Core: NBP9501-17PC

Location: central Ross Sea, in a seafloor trough
Lat.: -77˚ 27.053' **Long.:** -179˚ 2.967' **Depth (mwd):** -732

Lab. ID: AA - 23410 **GRL**-992-O **Depth (cm):** 2-4
Age: 21,840 ± 230 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 15.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.1
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 15.3 mg
Significance: This is the youngest date derived from central Ross Sea till and thus provides the best constraint on the timing of ice advance. The value is a maximum age of ice advance. Given the uncertainties with the 'reservoir' correction, the timing of ice advance across this site probably lies between 16-21 ^{14}C ka.

Stratigraphy: Core contains only diamicton.
Core Summary: Date is not reservoir corrected due to uncertainties with determining the proper value.
Reference: Licht, 1999

Core: NBP9501-18PC

Location: central Ross Sea, in a seafloor trough
Lat.: -77˚ 19.997' **Long.:** -179˚ 32.155' **Depth (mwd):** -819

Lab. ID: AA - 27801 **GRL**-1026-O **Depth (cm):** 0-2
Age: 3735 ± 60 **Corr. Age:** 0 ± 60 **Material:** Organic Concentrate
Weight (mg): 36.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.7
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 36.3 mg
Significance: Date gives surface sediment age which is used to correct subsequent downcore dates.

Lab. ID: AA - 23411 **GRL**-993-O **Depth (cm):** 10-12
Age: 17760 ± 120 **Corr. Age:** 14025 ± 120**Material:** Organic Concentrate
Weight (mg): 19.0

δ^{13}**C:** Assumed δ^{13}**C (‰):** -25
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 19.0 mg
Significance: Interpretation is equivocal, date either represents the timing of ice advance across site or that site received abundant old carbon and thus the date does not reflect the true timing of deposition.

Lab. ID: AA - 23412 **GRL**-994-O **Depth (cm):** 21.5-23.5
Age: 27580 ± 320 **Corr. Age:** 23845 ± 320**Material:** Organic Concentrate
Weight (mg): 20.4
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.6
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 20.4mg
Significance: Interpretation is equivocal, date either represents the timing of ice advance across site or that site received abundant old carbon and thus the date does not reflect the true timing of deposition.

Lab. ID: AA - 27802 **GRL**-1027-O **Depth (cm):** 26-28
Age: 20490 ± 260 **Corr. Age:** 16755 ± 260**Material:** Organic Concentrate
Weight (mg): 15.5
δ^{13}**C:** Measured δ^{13}**C (‰):** -23.7
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 15.5 mg
Significance: Sediments are post-glacial (Domack et al., 1999) and should yield very late Pleistocene to Holocene age. These post-glacial sediments appear to contain significant amounts of old/dead carbon which produces ages that are older than the probable age of deposition.

Lab. ID: AA - 23413 **GRL**-995-O **Depth (cm):** 41-43
Age: 25870 ± 250 **Corr. Age:** 22135 ± 250**Material:** Organic Concentrate
Weight (mg): 29.1
δ^{13}**C:** Assumed δ^{13}**C (‰):** -25
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 29.1 mg
Significance: Interpretation is equivocal, date either represents the timing of ice advance across site or that site received abundant old carbon and thus the date does not reflect the true timing of deposition.

Lab. ID: AA - 27803 **GRL**-1028-O **Depth (cm):** 62-64
Age: 24680 ± 490 **Corr. Age:** 20945 ± 490**Material:** Organic Concentrate
Weight (mg): 12.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.0
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 12.8 mg
Significance: Sediments are post-glacial (Domack et al., 1999) and should yield very late Pleistocene to Holocene age. These post-glacial sediments appear to contain significant

amounts of old/dead carbon which produces ages that are older than the probable age of deposition.

Stratigraphy: see Domack et al., 1999
Core Summary: Date is 'reservoir' corrected using the surface age obtained from the trigger core of 3735 (AA27801). Sedimentology of this core has been interpreted by Domack et al., 1999.
References: Licht, 1999; Domack et al., 1999

Core: NBP9501-24PC

Location: central Ross Sea, in a seafloor trough
Lat.: -76˚ 36.359' **Long.:** 175˚ 25.017' **Depth (mwd):** -585

Lab. ID: AA - 23414 **GRL**-996-O **Depth (cm):** 4-6
Age: 24090 ± 205 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 34.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.4
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 34.8 mg
Significance: Dates from this core give maximum estimates of the timing of ice advance.

Lab. ID: AA - 23415 **GRL**-997-O **Depth (cm):** 55-58
Age: 31310 ± 480 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 45.2
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.2
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 45.2 mg
Significance: Dates from this core give maximum estimates of the timing of ice advance.

Lab. ID: AA - 23416 **GRL**-998-O **Depth (cm):** 105-107
Age: 30640 ± 440 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 44.4
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.2
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 44.4 mg
Significance: Dates from this core give maximum estimates of the timing of ice advance. Date is not reservoir corrected due to uncertainties in determining the proper value.

Stratigraphy: This diamicton contains a vertical sedimentary fabric from mid-core downward. AA-23414 is above vertical diamicton (not directly above). AA-23416 is in diamicton with vertical sedimentary fabric.
Core Summary: The diamicton in core NBP9501-24 is interpreted to be subglacial till (Licht, 1999), thus dates from 95-24 are interpreted to be largely reworked. From these dates in till, the age of ice advance over this site can be constrained by using the youngest date as a maximum estimate ice advance. Since the youngest age in this core is 24.1 ^{14}C

ka, we can assume that ice advanced past this site after 20 ^{14}C ka, using a 4000 year surface age correction (Licht, 1999), in order to incorporate material of this age.
Reference: Licht, 1999

Core: NBP9606-38

Location: central Ross Sea, in front of Ross Ice Shelf
Lat.: -78˚ 8.5' **Long.:** -171˚ 1.6' **Depth (mwd):** 562

Lab. ID: AA - 25283 **GRL**-1017-O **Depth (cm):** surface
Age: 3580 ± 50 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 189.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -26.7
Contributor: A. Leventer
Sample Notes: estimated readily oxidizable organic carbon = 189.3 mg. Sample was labeled as (a).
Significance: Gives ^{14}C age of surface sediment. One of several dates that are part of a ^{14}C dating experiment to try to understand reservoir/reworking problem. The other sample from this box core (AA-25284) was a carbonate date.

Lab. ID: AA - 25284 **GRL**-1319-S **Depth (cm):** surface
Age: 1065 ± 45 **Corr. Age:** **Material:** brachiopod
Weight (mg): ~35 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.7
Contributor: A. Leventer
Sample Notes: possibly *Leiothyrella uva*
Significance: Gives ^{14}C age of surface sediment. One of several dates that are part of a ^{14}C dating experiment to try to understand reservoir/reworking problem. The other sample dated from this box core was an organic (AIO) date.

Stratigraphy: Collect at the surface of box core.
Core Summary: This surface age is younger than the age of surface acid-insoluble organic carbon, which is 3580 (AA25283). This pattern of old organic dates is common in the Ross Sea.
Reference: Andrews et al., 1997

Core: NBP9606-91

Location: central Ross Sea, outer continental shelf
Lat.: -75˚ 29.9' **Long.:** 178˚ 19.7' **Depth (mwd):** 451

Lab. ID: AA - 25280 **GRL**-1010-O **Depth (cm):** surface
Age: 3580 ± 50 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 62.6
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.7

Contributor: A. Leventer
Sample Notes: estimated readily oxidizable organic carbon = 62.6 mg. Sample is labeled (a).
Significance: One of several dates that are part of ^{14}C dating experiment to try to understand reservoir/reworking problem. Three dates were obtained from the surface of this box core.

Lab. ID: AA - 25281 **GRL**-1011-O **Depth (cm):** surface
Age: 3345 ± 50 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 40.9
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.8
Contributor: A. Leventer
Sample Notes: estimated readily oxidizable organic carbon = 40.9 mg. Sample is labeled (b).
Significance: One of several dates that are part of ^{14}C dating experiment to try to understand reservoir/reworking problem. Three dates were obtained from the surface of this box core.

Lab. ID: AA - 25282 **GRL**-1012-O **Depth (cm):** surface
Age: 3825 ± 50 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 114
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.9
Contributor: A. Leventer
Sample Notes: estimated readily oxidizable organic carbon = 114 mg. Sample is labeled (c)
Significance: One of several dates that are part of ^{14}C dating experiment to try to understand reservoir/reworking problem. Three dates were obtained from the surface of this box core.
Stratigraphy: Surface sediment is from a box core.
Core Summary: All three dates from this box core are very similar (eliminates between sample variation). The other two dates from this depth are 3580 (AA25280) and 3345 (AA25281).
Reference: Andrews et al., 1997

Western Ross Sea

Core: DF87-14

Location: western Ross Sea
Lat.: -72˚ 58.37' **Long.:** 179˚53.55‘ **Depth (mwd):** -658

Lab. ID: AA - 32955 **GRL**-1461-S **Depth (cm):** 140-142
Age: 40,500 ± 1500 **Corr. Age:** **Material:**
Weight (mg): 18.51 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0

Contributor: P. Perry

Core: E32-12

Location: western Ross Sea
Lat.: -72˚ 00’ **Long.:** 176.89˚ **Depth (mwd):** -347

Lab. ID: AA - 33408 **GRL**-1511-S **Depth (cm):** 0-2
Age: 35,900 ± 740 **Corr. Age:** **Material:**
Weight (mg): 6.86 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.1
Contributor: P. Perry

Core: E32-43

Location: western Ross Sea, continental slope
Lat.: -72˚ 27.2' **Long.:** 176˚ 59’ **Depth (mwd):** -1867

Lab. ID: AA - 32956 **GRL**-1470-S **Depth (cm):** 100-102
Age: 25050 ± 240 **Corr. Age:** 23850 ± 240 **Material:** Foraminifera
Weight (mg): 10.49 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.1
Contributor: P. Perry
Significance: This sample is from radiolarian-rich sand.

Lab. ID: AA - 26516 **GRL**-1333-S **Depth (cm):** 142-144
Age: 36500 ± 940 **Corr. Age:** 35300 ± 940 **Material:** Foraminifera
Weight (mg): 6.0 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.29
Contributor: Licht/Andrews
Significance: This date appears to represent a time of enhanced biogenic production. This sample is from the base of one of the buff colored foraminifera-rich layers.

Lab. ID: AA - 32969 **GRL**-1497-S **Depth (cm):** 160-162
Age: 35,970 ± 790 **Corr. Age:** 34,570 ± 790 **Material:** Foraminifera
Weight (mg): 11.3 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.4
Contributor: P. Perry
Significance: Date should help constrain the timing of increased biogenic production, but this date is slightly younger than the overlying foraminifera date. This sample is from the middle of a muddy sandy layer underlying the foraminifera-rich sand that was dated (AA26516).

Core: E32-44

Location: western Ross Sea
Lat.: -71.385˚ **Long.:** 171.593˚ **Depth (mwd):** -521

Lab. ID: AA – 33409 **GRL**-1512-S **Depth (cm):** 325-327
Age: >41,200 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 4.91 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.2
Contributor: P. Perry

Lab. ID: AA - 33410 **GRL**-1513-S **Depth (cm):** 445-447
Age: >40,600 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 4.74 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.2
Contributor: P. Perry

Core: NBP9401-4

Location: western Ross Sea, from a bank on the outer continental shelf
Lat.: -73˚ 32.922' **Long.:** 178˚ 38.874’ **Depth (mwd):** -365

Lab. ID: AA - 19907 **GRL**-1212-S **Depth (cm):** surface
Age: 3335 ± 100 **Corr. Age:** 2135 ± 100 **Material:** Foraminifera
Weight (mg): 4.3 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A. Jennings
Significance: gives age of surface material on the outer shelf

Lab. ID: AA – 19906 **GRL**-1211-S **Depth (cm):** surface
Age: 3935 ± 110 **Corr. Age:** 2735 ± 110 **Material:** Foraminifera
Weight (mg): 3.8 **Genus:** *Pullenia* **Species:** *subcarinata*
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A.E.Jennings
Significance: gives age of surface material on the outer shelf

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Core: NBP9401-22TC

Location: western Ross Sea, mid continental shelf in a seafloor trough
Lat.: -74˚ 2.286' **Long.:** 171˚ 40.5’ **Depth (mwd):** -448

Lab. ID: AA - 21754 **GRL**-963-O **Depth (cm):** 15-17
Age: 13450 ± 90 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 55.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -26.5
Contributor: K. Licht

Lab. ID: AA - 21755 **GRL**-964-O **Depth (cm):** 73-75
Age: 13365 ± 90 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 75.0
δ^{13}**C:** Measured δ^{13}**C (‰):** -26.9
Contributor: K. Licht

Core Summary: Reservoir corrected age is not given due to uncertainties with selecting the proper surface age correction.

Core: NBP9401-22PC

Location: western Ross Sea, mid continental shelf in a seafloor trough
Lat.: -74˚ 2.286' **Long.:** 171˚ 40.5' **Depth (mwd):** -448

Lab. ID: AA - 19919 **GRL**-940-O **Depth (cm):** 2-4
Age: 8880 ± 75 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 27.1
δ^{13}**C:** Assumed δ^{13}**C (‰):** -25.0
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 27.1 mg
Significance: gives age of surface of piston core

Lab. ID: AA - 19920 **GRL**-941-O **Depth (cm):** 42-43.5
Age: 9435 ± 75 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 26.2
δ^{13}**C:** Assumed δ^{13}**C (‰):** -25.0
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 29.8 mg

Lab. ID: AA - 21756 **GRL**-965-O **Depth (cm):** 108-110
Age: 14550 ± 95 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 28.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -26.6
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 28.3 mg

Lab. ID: AA - 21757 **GRL**-966-O **Depth (cm):** 190-192
Age: 29100 ± 400 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 36.2
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.2
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 36.2 mg

Lab. ID: AA - 21758 **GRL**-967-O **Depth (cm):** 256-258
Age: 32680 ± 660 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 48.3

δ^{13}C: Measured **δ^{13}C (‰):** -25.0
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 48.3 mg

Stratigraphy: core is a stratified diamicton
Core Summary: Reservoir corrected age is not given due to uncertainties with selecting the proper surface age correction.

Core: NBP9501-29

Location: western Ross Sea
Lat.: -76˚ 59.076 **Long.:** 162E˚ 53.27' **Depth (mwd):** -867

Lab. ID: AA - 29207 **GRL**-1404-S **Depth (cm):** 247
Age: 4050 ± 110 **Corr. Age:** **Material:** Mollusc
Weight (mg): 1
δ^{13}C: Measured **δ^{13}C (‰):** -1.7
Contributor: CU
Sample notes: bivalves

Lab. ID: AA - 29208 **GRL**-1405-S **Depth (cm):** 538
Age: 4900 ± 65 **Corr. Age:** **Material:** Mollusc
Weight (mg): 4.6
13C: Measured **δ^{13}C (‰):** -2.4
Contributor: CU
Sample notes: bivalves

Core: NBP9501-30KC

Location: western Ross Sea, core is South of Drygalski Ice Tongue
Lat.: -76˚ 00.035' **Long.:** 164˚ 35.114' **Depth (mwd):** -752

Lab. ID: AA - 20738 **GRL**-943-O **Depth (cm):** 0-2
Age: 4350 ± 75 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 24.1
δ^{13}C: Assumed **δ^{13}C (‰):** -25
Contributor: Licht/Cunningham/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 24.1 mg
Significance: Gives age of surface sediment, but the date at 5-7 cm is younger.

Lab. ID: AA - 20739 **GRL**-944-O **Depth (cm):** 5-7
Age: 3025 ± 55 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 27.7
δ^{13}C: Measured **δ^{13}C (‰):** -25.2
Contributor: Licht/Cunningham/Andrews

Sample Notes: estimated readily oxidizable organic carbon = 27.7 mg. Kasten core is 53 cm long.
Significance: This date is younger than the surface age.

Lab. ID: AA - 20740 **GRL**-945-O **Depth (cm):** 18-20
Age: 5080 ± 60 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 25.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.8
Contributor: Licht/Cunningham/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 25.3 mg. This kasten core is 53 cm long
Significance: Date is from sediment deposited in open marine conditions.

Lab. ID: AA - 20741 **GRL**-946-O **Depth (cm):** 29-31
Age: 8010 ± 90 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 26.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.9 and -25.8
Contributor: Licht/Cunningham/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 26.3 mg. This kasten core is 53 cm long.
Significance: This date is from the base of open marine mud.

Lab. ID: AA - 20742 **GRL**-947-O **Depth (cm):** 34-36
Age: 9855 ± 100 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 23.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.8
Contributor: Licht/Cunningham/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 23.8 mg. This kasten core is 53 cm long
Significance: This date indicates the end of glacial marine sedimentation in the western Ross Sea.

Stratigraphy: Core contains relatively complete deglaciation sequence, including a substantial amount of Holocene sediments.
Core Summary: Date is not reservoir corrected due to uncertainties with determining the proper value. A reasonable estimate of the proper correction is probably ca. 3000 years.

References: Andrews et al., 1999; Domack et al., 1999

Core: NBP9501-31KC

Location: western Ross Sea, southeast of Drygalski Ice Tongue
Lat.: -75˚ 42.010 **Long.:** 165˚ 25.051' **Depth (mwd):** -879

Lab. ID: AA - 21766 **GRL**-980-O **Depth (cm):** 30-32

Age: 3940 ± 45 **Corr. Age:** 1515 ± 45 **Material:** Organic Concentrate
Weight (mg): 28.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.9
Contributor: Cunningham/Licht/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 28.7 mg
Significance: Constrains age of open marine sedimentation and is used to calculate sediment accumulation rates.

Lab. ID: AA - 21767 **GRL**-981-O **Depth (cm):** 70-72
Age: 5925 ± 60 **Corr. Age:** 3500 ± 60 **Material:** Organic Concentrate
Weight (mg): 23.4
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.4
Contributor: Cunningham/Licht/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 23.4 mg
Significance: Constrains age of open marine sedimentation and is used to calculate sediment accumulation rates.

Lab. ID: AA - 21768 **GRL**-982-O **Depth (cm):** 87-89
Age: 7270 ± 65 **Corr. Age:** 4845 ± 65 **Material:** Organic Concentrate
Weight (mg): 25.1
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.5
Contributor: Cunningham/Licht/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 25.1 mg
Significance: Constrains age of open marine sedimentation and is used to calculate sediment accumulation rates.

Lab. ID: AA - 20743 **GRL**-948-O **Depth (cm):** 167-169
Age: 26265 ± 325 **Corr. Age:** 23840 ± 325 **Material:** Organic Concentrate
Weight (mg): 52.6
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.5
Contributor: Licht/Cunningham/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 52.6 mg
Significance: This date appears to be >10,000 years too old if the lithofacies was deposited post-glacially.

Lab. ID: AA - 20744 **GRL**-949-O **Depth (cm):** 200
Age: 31605 ± 520 **Corr. Age:** 29180±520 **Material:** Organic Concentrate
Weight (mg): 107.1
δ^{13}**C:** Measured δ^{13}**C (‰):** -23.4
Contributor: Licht/Cunningham/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 107.1 mg. This kasten core is 210 cm long.
Significance: This date gives the maximum age of grounded ice advance across this site.

Stratigraphy: Date is from diatom-rich green mud deposited in open marine conditions. see also Cunningham, 1998; Cunningham et al., 1999; Domack et al., 1999

Core Summary: Date is 'reservoir' corrected by 2425 years, which is the age of the surface sediment (AA17364).
References: Cunningham, 1998; Cunningham et al., 1999; Domack et al., 1999

Core: NBP9501-34KC

Location: western Ross Sea, in Drygalski Trough near Drygalski Ice Tongue
Lat.: -75˚ 9.892' **Long.:** 164˚ 29.665' **Depth (mwd):** -1257

Lab. ID: AA - 20745 **GRL**-950-O **Depth (cm):** 0-1
Age: 3205 ± 60 **Corr. Age:** 0 ± 60 **Material:** Organic Concentrate
Weight (mg): 30.6
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.7
Contributor: Licht/Cunningham/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 30.6 mg
Significance: Gives age of surface sediment.
Core Summary: This date will be used as the surface age correction for other acid insoluble organic (AIO) dates from this core. This kasten core is 234 cm long.

Lab. ID: AA - 29206 **GRL**-1403-S **Depth (cm):** 13
Age: 1005 ± 55 **Corr. Age:** **Material:** Mollusc
Weight (mg): 6 **Genus:** *Yoldiella* **Species:**
Contributor: Licht
Significance: This gives the timing of open marine depositional conditions. This is a paired date with AA17397 (shell date) and AA19922 which is an AIO date of 5650 (corrected).

Lab. ID: AA - 19922 **GRL**-951-O **Depth (cm):** 13-14
Age: 8855 ± 95 **Corr. Age:** 5650 ± 95 **Material:** Organic Concentrate
Weight (mg): 52.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.5
Contributor: Licht/Jennings/Cunningham
Sample Notes: estimated readily oxidizable organic carbon = 52.8 mg
Significance: This gives the timing of open marine depositional conditions. This date is at a color transition from olive green above to grayish below in sandy mud.

Lab. ID: AA - 20746 **GRL**-952-O **Depth (cm):** 132
Age: 13330 ± 95 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 59.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.5
Contributor: Licht/Cunningham/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 59.3 mg
Significance: Since this core has not undergone a full suite of analyses, the reliability of this date may be questionable if the stratified lithofacies represents turbidite deposition. This lithofacies is alternating sand/mud layer that are each several cm thick (the mud layer is always thickest).

Lab. ID: AA - 19923 **GRL**-953-O **Depth (cm):** 229
Age: 36800 ± 900 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 59.9
δ^{13}**C:** Assumed δ^{13}**C (‰):** -25
Contributor: Licht/Jennings/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 59.9 mg
Significance: Although not completely analyzed, this facies probably represents glacial marine sedimentation. The reliability of the age is difficult to assess because it is an old date on the acid insoluble organic (AIO) fraction. It should be taken as a maximum age. This date is from a diamicton near the base of the core that has concentrations of mud (burrowline and thin stringers) and may contain tephra.

Core Summary: The surface age (reservoir) correction is taken as 3205 yrs (AA20745). This is a paired date with AA29206 (shell date) and AA17397 (shell date). The two shell dates are very similar. With all corrections, there is about 5500 years difference between the shell dates and the acid insoluble organic (AIO). The sediment does not appear to be disturbed, so this may be a bioturbation problem. The other dates are not 'reservoir' corrected due to uncertainties in determining the proper correction across a major facies change.

Core: NBP9501-37KC

Location: western Ross Sea, northern Drygalski Trough
Lat.: -74˚ 29.917' **Long.:** 167˚ 44.645' **Depth (mwd):** -924

Lab. ID: AA - 20747 **GRL**-954-O **Depth (cm):** 83-84
Age: 17800 ± 175 **Corr. Age:** 15025±175 **Material:** Organic Concentrate
Weight (mg): 22.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.2
Contributor: Cunningham/Licht/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 22.8 mg
Significance: This date occurs as biogenic silica is beginning to rise above the diamicton unit. We needed more dates in this interval in order to constrain the timing of diatom events in the late glacial and Holocene. Date is from gray silty clay interpreted by Domack et al., (1999) as sub ice shelf deposition. This date on post-glacial sediment appears to be several thousand years too old. Date is corrected by surface sediment age of 2775 (AA17357).

Lab. ID: AA - 23228 **GRL**-983-0 **Depth (cm):** 93-95
Age: 19385 ± 135 **Corr. Age:** 16610 ± 135 **Material:** Organic Concentrate
Weight (mg): 30.9
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.5
Contributor: Cunningham/Licht/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 30.9 mg

Significance: Should help constrain timing of ice sheet retreat, but the date appears to be several thousand years too old. Date is from base of silty clay unit interpreted as sub-ice shelf sediment by Domack et al., 1999. Date is corrected by surface sediment age of 2775 (AA17357).

Lab. ID: AA - 21769 **GRL**-984-0 **Depth (cm):** 125-127
Age: 30695 ± 460 **Corr. Age:** 27920 ± 460 **Material:** Organic Concentrate
Weight (mg): 57.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.2
Contributor: Cunningham/Licht/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 57.8 mg
Significance: Date is from top of basal diamicton interpreted as till by Domack et al., 1999 (diamicton may also be interpreted as ice-proximal glacial marine sediment. If sediment is till, date gives maximum estimate of the timing of ice advance. Date is corrected by surface sediment age of 2775 (AA17357).

Lab. ID: AA - 20748 **GRL**-955-O **Depth (cm):** 146-148
Age: 26895 ± 375 **Corr. Age:** 24120 ± 375 **Material:** Organic Concentrate
Weight (mg): 70.0
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.1
Contributor: Cunningham/Licht/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 70.0 mg. This kasten core is 174 cm long.
Significance: Date is from basal diamicton in this core interpreted as till by Domack et al., 1999 (diamicton may also be interpreted as ice-proximal glacial marine sediment. If sediment is till, date gives maximum estimate of the timing of ice advance. Date is corrected by surface sediment age of 2775 (AA17357).
References: Cunningham, 1998; Cunningham et al., 1999; Domack et al., 1999

Core: NBP9501-39KC

Location: western Ross Sea, mid-continental shelf near LGM grounding line
Lat.: -74˚ 28.448' **Long.:** 173˚ 30.65' **Depth (mwd):** -557

Lab. ID: AA - 21770 **GRL**-985-O **Depth (cm):** 80-82
Age: 5820 ± 90 **Corr. Age:** 2680 ± 90 **Material:** Organic Concentrate
Weight (mg): 43.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -29.3
Contributor: Cunningham/Licht/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 43.7 mg
Significance: Date constrains timing of open marine conditions on Ross Sea continental shelf and is used to calculate sediment accumulation rates. Date is from green, diatom-rich mud deposited in open marine conditions
Core Summary: Date is 'reservoir' corrected by surface age of 3140 (AA17351).

Lab. ID: AA - 25274 **GRL**-999-O **Depth (cm):** 98-100
Age: 6565 ± 60 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 23.9
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.8
Contributor: K. Licht/J.T. Andrews
Sample Notes: estimated readily oxidizable organic carbon = 23.9 mg
Significance: One of several dates that are part of ^{14}C dating experiment -to try to understand reservoir/reworking problem. Three dates were taken from this core at this depth. Date is from homogenous green diatom-rich (open marine) mud.
Core Summary: All three dates from this depth are essentially the same (eliminates between sample variation). The other two dates from this depth are 6520 (AA25275) and 6665 (AA25276).

Lab. ID: AA - 25275 **GRL**-1000-O **Depth (cm):** 98-100
Age: 6520 ± 55 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 39.5
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.9
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 39.5 mg
Significance: One of several dates that are part of ^{14}C dating experiment -to try to understand reservoir/reworking problem. Three dates were taken from this core at this depth. Date is from homogenous green diatom-rich (open marine) mud. All three dates from this depth are essentially the same (eliminates between sample variation). The other two dates from this depth are 6565 (AA25274) and 6665 (AA25276).

Lab. ID: AA - 25276 **GRL**-1001-O **Depth (cm):** 98-100
Age: 6665 ± 55 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 30.9
δ^{13}**C:** Measured δ^{13}**C (‰):** -28.8
Contributor: K. Licht
Sample Notes: estimated readily oxidizable organic carbon = 30.9 mg
Significance: One of several dates that are part of ^{14}C dating experiment -to try to understand reservoir/reworking problem. Three dates were taken from this core at this depth. Date is from homogenous green diatom-rich (open marine) mud. All three dates from this depth are essentially the same (eliminates between sample variation). The other two dates from this depth are 6565 (AA25274) and 6520 (AA25275).

Lab. ID: AA - 21771 **GRL**-986-O **Depth (cm):** 170-172
Age: 8980 ± 70 **Corr. Age:** 5840 ± 70 **Material:** Organic Concentrate
Weight (mg): 39.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -29.0
Contributor: Cunningham/Licht/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 39.7 mg
Significance: Date constrains timing of open marine conditions on Ross Sea continental shelf and is used to calculate sediment accumulation rates. Date is from green, diatom-

rich mud deposited in open marine conditions Date is 'reservoir' corrected by surface age of 3140 (AA17351).

Lab. ID: CAMS - 27576 **GRL**-1250-S **Depth (cm):** 217-222
Age: 17,090 ± 150 **Corr. Age:** 15,890 ± 150 **Material:** Foraminifera
Weight (mg): 1.7 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: Licht/Andrews/Jennings
Sample Notes: mixed benthics
Significance: Gives maximum age of grounded ice advance over the site and/or indicates sedimentation throughout the LGM, including carbonate production. Sample is from the top of the lowermost unit in core 39 - a massive diamicton interpreted by Domack et al. (1999) as till. However, relative abundance of foraminifera indicate that this diamicton was probably initially ice-proximal glacial marine sediment that has ungone only minor reworking.

Lab. ID: AA - 19924 **GRL**-956-O **Depth (cm):** 230
Age: 26585 ± 280 **Corr. Age:** 23445 ± 280 **Material:** Organic Concentrate
Weight (mg): 65.3
δ^{13}**C:** Assumed δ^{13}**C (‰):** -25
Contributor: Licht/Cunningham/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 65.3 mg
Significance: This AIO date is older than underlying dates on foraminifera, which is consistent with paired dates from the Ross Sea (Licht, 1999). Sample is from near the top of the lowermost unit in core 39 - a massive diamicton interpreted by Domack et al. (1999) as till. However, relative abundance of foraminifera indicate that this diamicton was probably initially ice-proximal glacial marine sediment that has ungone only minor reworking. Date is 'reservoir' corrected by surface age of 3140 (AA17351).

Lab. ID: AA - 20791 **GRL**-1249-S **Depth (cm):** 245-247
Age: 20,465 ± 350 **Corr. Age:** 19,265 ± 350 **Material:** Foraminifera
Weight (mg): 2.6 **Genus:** see below **Species:** see below
δ^{13}**C:** Measured δ^{13}**C (‰):** +0.12
Contributor: Licht/Andrews/Jennings
Sample Notes: material dated: 30 *Globocassidulina biora*, 9 *Cibicides grossepunctatus*, 9 *Cassidulinoides porrecta*, 1 *Glandulina antarctica*, 1 *Quinque loculina seminulum*
$\delta^{18}O = 2.970 \pm 0.013‰$
Significance: Gives maximum age of grounded ice advance over the site and or indicates sedimentation throughout the LGM, including carbonate production. Sample is from the lowermost unit in core 39 - a massive diamicton interpreted by Domack et al. (1999) as till. Relative abundance of foraminifera indicate that this diamicton was probably initially ice-proximal glacial marine sediment that has ungone only minor reworking.

Lab. ID: AA - 19925 **GRL**-957-O **Depth (cm):** 249-250

Age: 25750 ± 320 **Corr. Age:** 22610 ± 320 **Material:** Organic Concentrate
Weight (mg): 58.9
δ^{13}**C:** Measured δ^{13}**C (‰):** -26.0
Contributor: Licht/Cunningham/Jennings
Sample Notes: estimated readily oxidizable organic carbon = 58.9 mg
Significance: This date is younger than overlying AIO date at 230 cm indicating that this diamicton contains reworked carbon. Sample is from near the base of the lowermost unit in core 39 - a massive diamicton interpreted by Domack et al. (1999) as till. However, relative abundance of foraminifera indicate that this diamicton was probably initially ice-proximal glacial marine sediment that has ungone only minor reworking. Date is 'reservoir' corrected by surface age of 3140 (AA17351).

Lab. ID: CAMS - 27577 **GRL**-1251-S **Depth (cm):** 249-252
Age: 20,320 ± 110 **Corr. Age:** 19,120 ± 110 **Material:** Foraminifera
Weight (mg): 2.0 **Genus:** **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: Licht/Jennings/Andrews
Sample Notes: mixed benthics
Significance: Gives maximum age of grounded ice advance over the site and/or indicates sedimentation throughout the LGM, including carbonate production. Sample is from the lowermost unit in core 39 - a massive diamicton interpreted by Domack et al. (1999) as till. Relative abundance of foraminifera indicate that this diamicton was probably initially ice-proximal glacial marine sediment that has ungone only minor reworking. Suspect some component of reworked fauna within the foraminifera

Lab. ID: AA - 18400 **GRL**-1201-S **Depth (cm):** 257
Age: >34,000 **Corr. Age:** **Material:** coral
Weight (mg): 9.9 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -5.27
Contributor: Licht/Andrews/Jennings
Sample Notes: Alcyonarian coral, unknown genus and species
Significance: Date is clearly reworked. Coral is from basal diamicton interpreted by Domack et al., (1999) as till.
References: Cunningham, 1998; Cunningham et al., 1999; Domack et al., 1999; Andrews et al.,1997

Core: NBP9501-42TC

Location: western Ross Sea, site is at/near the LGM grounding line on the mid-continental shelf (seaward of NBP9501-39KC)
Lat.: -74˚ 27.578' **Long.:** 173˚ 35.834' **Depth (mwd):** -568

Lab. ID: AA - 21764 **GRL**-976-O **Depth (cm):** 20-22
Age: 3085 ± 45 **Corr. Age:** **Material:** Organic Concentrate

Weight (mg): 21.7
δ^{13}**C:** Measured δ^{13}**C (‰):** -29.5
Contributor: Licht/Jennings/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 21.7 mg

Lab. ID: AA - 21765 **GRL**-977-O **Depth (cm):** 68-70
Age: 5230 ± 50 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 39.4
δ^{13}**C:** Measured δ^{13}**C (‰):** -29.3
Contributor: Licht/Jennings/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 39.4 mg

Stratigraphy: Trigger core is all siliceous mud.
Core Summary: Dates from this core give the age of open marine sedimentation on the mid- continental shelf. The two dates from this core are not reservoir corrected since the surface sediment age is not known (the value is probably ~2500 years).

Core: NBP9501-42PC

Location: western Ross Sea, site is at/near the LGM grounding line on the mid-continental shelf (seaward of NBP9501-39KC)
Lat.: -74˚ 27.578' **Long.:** 173˚ 35.834' **Depth (mwd):** -568

Lab. ID: AA - 23226 **GRL**-978-O **Depth (cm):** 142-144
Age: 23,940 ± 225 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 40.1
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.3
Contributor: Licht/Jennings/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 40.1 mg
Significance: This date probably contains a significant amount of old/dead carbon making the age difficult to interpret. See below for possible explanations. Reservoir correction is not applied due to uncertainites in determining the proper value (probably ~2500 yrs).

Lab. ID: AA - 19926 **GRL**-958-O **Depth (cm):** 146-148
Age: 29400 ± 1200 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 40.1
δ^{13}**C:** Measured δ^{13}**C (‰):** -25.4
Contributor: Licht/Jennings/Andrews
Sample Notes: estimated readily oxidizable organic carbon = 40.1 mg
Significance: This date probably contains a significant amount of old/dead carbon making the age difficult to interpret. See below for possible explanations. Reservoir correction is not applied due to uncertainites in determining the proper value (probably ~2500 yrs).

Lab. ID: AA - 20737 **GRL**-1246-S **Depth (cm):** 190-192
Age: 18,085 ± 325 **Corr. Age:** 16,885 ± 325 **Material:** Foraminifera
Weight (mg): 6.2 **Genus:** *Globocassidulina* **Species:** *biora*
δ^{13}**C:** Assumed δ^{13}**C (‰):** -0.35
Contributor: Licht/Andrews/Jennings
Significance: Age of forams indicates that glacial marine deposition occurred on the outer Ross Sea continental shelf during the LGM . $\delta^{18}O$ = 3.918±0.018‰

Lab. ID: AA - 21752 **GRL**-1275-S **Depth (cm):** 258-260
Age: 18180 ± 190 **Corr. Age:** 16980 ± 190 **Material:** Benthic Foraminifera
Weight (mg): 4.4 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.4
Contributor: Licht/Andrews/Jennings
Sample Notes: 51 *Globocassidulina biora*, 42 *Angulogerina earlandi*, 6 *Globocassidulina subglobosa*, 3 *Pullenia subcarinata*, 2 *Cibicides refulgens*, 1 *Astrononian antarcticus*, 1 *Astrononian echols*
Significance: Age of forams indicates that glacial marine deposition occurred on the outer Ross Sea continental shelf during the LGM .

Stratigraphy: Core is primarily diamicton containing visible forams.
Core Summary: The four dates from this piston core may be explained in two ways: (1) sediments were deposited in an ice-proximal position during the LGM and were subsequently overrun causing some reversals in ^{14}C dates or (2) due to the ice-proximal position of this core, the material that was dated contains some amount of old/dead carbon yielding old AIO dates; the similarity of the two foram dates ~70cm apart indicates rapid sediment deposition. Geometry of the sediment package identified from high resolution seismic data support the second explanation.

Core: NBP9501-52

Location: western Ross Sea, from a bank on the outer continental shelf
Lat.: -73˚ 28.005' **Long.:** 174˚ 14.982' **Depth (mwd):** -339

Lab. ID: AA - 19905 **GRL**-1210-S **Depth (cm):** surface
Age: 6250 ± 60 **Corr. Age:** 5050 ± 60 **Material:** Foraminifera
Weight (mg): 9.1 **Genus:** *Cassidulinoides* **Species:** *porrecta*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.27
Contributor: Jennings/Andrews/Licht
Significance: Date gives age of surface material on the outer shelf.

Lab. ID: AA - 19904 **GRL**-1209-S **Depth (cm):** surface
Age: 5790 ± 80 **Corr. Age:** 4590 ± 80 **Material:** Foraminifera
Weight (mg): 11.5 **Genus:** *Globocassidulina* **Species:** *biora*
δ^{13}**C:** Measured δ^{13}**C (‰):** +0.24

Contributor: Jennings/Andrews/Licht
Significance: Date gives age of surface material on the outer shelf.

Core Summary: Surface ages from this grab are older than expected since the modern reservoir age is only 1200-1300 years (Gordon and Harkness, 1992; Berkman and Foreman, 1996). These old ages may be accounted for by low accumulation rates on the shallow banks.

Core: NBP9501-53PC

Location: western Ross Sea, outer continental shelf
Lat.: -73˚ 28.036' **Long.:** 174˚ 14.881' **Depth (mwd):** -341

Lab. ID: AA - 19900 **GRL**-1205-S **Depth (cm):** 15-16
Age: 16,055 ± 125 **Corr. Age:** 14,855 ± 125 **Material:** Foraminifera
Weight (mg): 8.7 **Genus:** *Globocassidulina* **Species:** *biora*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.76
Contributor: Jennings/Andrews/Licht

Lab. ID: AA - 23227 **GRL**-979-O **Depth (cm):** 17-19
Age: 12,600 ± 80 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 37.2
δ^{13}**C:** Measured δ^{13}**C (‰):** -27.7
Contributor: Jennings/Andrews/Licht
Sample Notes: estimated readily oxidizable organic carbon = 37.2 mg
Significance: Age is not reservoir corrected due to uncertainty in determining the proper value. This acid-insoluble organic date is younger than a foram date from similar depth (AA19900).

Lab. ID: AA - 19901 **GRL**-1206-S **Depth (cm):** 320-321
Age: 20,895 ± 250 **Corr. Age:** 19,695 ± 250 **Material:** Foraminifera
Weight (mg): 12.2 **Genus:** *Globocassidulina* **Species:** *biora*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.61
Contributor: Jennings/Andrews/Licht

Stratigraphy: Entire core is foram-rich sandy mud.
Core Summary: E. Domack and M. Taviani reported finding a "living" barnacle plate (on a pebble) at depth in the core - the dates are in disagreement with their finding. *core appears to be disturbed in X-ray

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Core: NBP9501-54

Location: western Ross Sea, from a shallow bank on the outer continental shelf
Lat.: -73˚ 8.971' **Long.:** 174˚ 58.062' **Depth (mwd):** -381

Lab. ID: AA - 19903 **GRL**-1208-S **Depth (cm):** surface
Age: 4950 ± 100 **Corr. Age:** 3750 ± 100 **Material:** Foraminifera
Weight (mg): 7.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.43
Contributor: Jennings/Andrews/Licht
Significance: Date gives age of surface material on the outer shelf.

Lab. ID: AA - 19902 **GRL**-1207-S **Depth (cm):** surface
Age: 14,810 ± 160 **Corr. Age:** 13,610 ± 160 **Material:** Foraminifera
Weight (mg): 11.3 **Genus:** *Globocassidulina* **Species:** *biora*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.22
Contributor: A.E. Jennings/J.T. Andrews/K. Licht

Significance: Date gives age of surface material on the outer shelf.
Core Summary: This surface age is much older than expected since the modern reservoir age is only 1200-1300 years (Gordon and Harkness, 1992; Berkman and Foreman, 1996). These old ages may be accounted for by low accumulation rates on the shallow banks. This grab sample contained living barnacles when collected.

Core: NBP9606-15

Location: western Ross Sea, eastern side of Drygalski Trough
Lat.: -75˚ 2.0' **Long.:** 166˚ 15.8' **Depth (mwd):** 939

Lab. ID: AA - 25277 **GRL**-1002-O **Depth (cm):** surface
Age: 2755 ± 45 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 37
δ^{13}**C:** Measured δ^{13}**C (‰):** -23.3
Contributor: A. Leventer
Sample Notes: estimated readily oxidizable organic carbon = 37 mg. Sample labeled (a).

Lab. ID: AA - 25278 **GRL**-1003-O **Depth (cm):** surface
Age: 2925 ± 45 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 30.3
δ^{13}**C:** Measured δ^{13}**C (‰):** -24.4
Contributor: A. Leventer
Sample Notes: estimated readily oxidizable organic carbon = 30.3 mg. Sample labeled (b).

Lab. ID: AA - 25279 **GRL**-1005-O **Depth (cm):** surface
Age: 2805 ± 50 **Corr. Age:** **Material:** Organic Concentrate
Weight (mg): 30
δ^{13}**C:** Measured δ^{13}**C (‰):** -23.9
Contributor: A. Leventer

Sample Notes: estimated readily oxidizable organic carbon = 30 mg. Sample labeled (d).

Stratigraphy: Surface sediment from box core.
Significance: Gives ^{14}C age of surface sediment. One of several dates that are part of ^{14}C dating experiment to try to understand reservoir/reworking problem. Three samples were dated from this surface of this box core.
Core Summary: All three dates from this box core are essentially the same (eliminates between sample variation).
Reference: Andrews et al., 1997

Weddell Sea

Core: G18

Location: Weddell Sea
Lat.: -72˚ 06 **Long.:** 32˚ 36' **Depth (mwd):** -1445

Lab. ID: AA - 27755 **GRL**-1347-S **Depth (cm):** 100-105
Age: 11840 ± 200 **Corr. Age:** **Material:** mixed foraminifera
Weight (mg): 3.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.014
Contributor: John B. Anderson
Sample Notes: 167 *Neogloboquadrina pachyderma* (s.), 219 *Globocassidulina subglobosa*, 1 *C. teretis*, 11 *Nonionella sp*., 2 *Valvulineria sp*., and 28 miscellaneous benthics

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Core: IWSOE68 52 PH

Location: Weddell Sea, continental rise
Lat.: -67˚ 22 **Long.:** 47˚ 22' **Depth (mwd):** -3768

Lab. ID: AA - 19909 **GRL**-1214-S **Depth (cm):** 7-12 cm
Age: 29770 ± 470 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 13.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.47
Contributor: J.B. Anderson
Sample Notes: 900 foraminifera
Significance: Date gives age of (glacial) marine sedimentation on continental rise. IRD content at this time is 3.5%. $\delta^{18}O$ = 4.7 ‰

Lab. ID: AA - 19910 **GRL**-1215-S **Depth (cm):** 42-47
Age: 25900 ± 620 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 12.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)

δ^{13}**C:** Measured δ^{13}**C (‰):** 0.1
Contributor: J. B. Anderson
Sample Notes: 800 foraminifera
Significance: Date gives age of (glacial?) marine sedimentation on continental rise. IRD content at this time is low. $\delta^{18}O$ = 4.97 ‰

Lab. ID: AA - 19911 **GRL**-1216-S **Depth (cm):** 80
Age: 32500 ± 1420 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 4.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.4
Contributor: J. B. Anderson
Sample Notes: 420 foraminifera
Significance: Date gives age of glacial marine sedimentation on continental rise. IRD content at this time is high (>15%). $\delta^{18}O$ = 4.9 ‰

Stratigraphy: Core contains gravelly, sandy mud overlain by mud.
Core Summary: Old near-surface age indicates very low sediment accumulation rates and/or the top of the sediment column was lost during the coring process. Date (AA-19910) is younger than an overlying date (AA19909)
Reference: Anderson and Andrews, 1999

Core: IWSOE68 32 PH

Location: Weddell Sea, continental rise
Lat.: -68˚ 38 **Long.:** 47˚ 20’ **Depth (mwd):** -3374

Lab. ID: AA - 19908 **GRL**-1213-S **Depth (cm):** 5-10
Age: 10855 ± 125 **Corr. Age:** 9655 ± 125 **Material:** Foraminifera
Weight (mg): 7.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.42
Contributor: John B. Anderson
Sample Notes: 900 *N. pachyderma* (s.)
Significance: Gives Holocene age of glacial marine sedimentation. This date from the upper high-IRD zone.

Lab. ID: AA - 24962 **GRL**-1204-S **Depth (cm):** 60
Age: >49,900 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 6.3 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.35
Contributor: John B. Anderson
Sample Notes: 620 *N. pachyderma* (s.)
Significance: Gives age of glacial marine sedimentation to be >49,900 years. This date is from near the top of the lower high-IRD zone.

Stratigraphy: Core is gravelly sandy mud overlain by mud and contains two zones of high IRD content (>10% by wt.).

Reference: Anderson and Andrews, 1999

Core: IWSOE68 37 PH

Location: Weddell Sea, continental rise
Lat.: -69˚ 41' **Long.:** -46.267˚ 16' **Depth (mwd):** -3777

Lab. ID: AA - 24841 **GRL**-1318-S **Depth (cm):** 56-60
Age: 26,570 ± 490 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 2.0 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.B. Anderson
Significance: Date gives age of high IRD input.

Stratigraphy: Core contains mud with a layer of gravelly, sandy mud that coincides with a peak in IRD abundance (10%).
Reference: Anderson and Andrews, 1999

Core: IWSOE70 2-19-1 PC

Location: Weddell Sea, eastern, mid-continental shelf
Lat.: -74˚ 21' **Long.:** -38˚ 15' **Depth (mwd):** -489

Lab. ID: CAMS - 44867 **GRL**-1345-S **Depth (cm):** 30-35
Age: 16190 ± 70 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 8.2 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: John B. Anderson
Sample Notes: 77 *Globocassidulina biora*, 10 *Cibicides lobatulus*, 3 *Glandulina sp.*
Significance: This date is above the top stratified diamicton.

Lab. ID: CAMS - 44868 **GRL**-1346-S **Depth (cm):** 350-355
Age: 11270 ± 60 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 8.3 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: John B. Anderson
Sample Notes: 109 *Neoglobоquadrina pachyderma* (s.), 33 *Angulogerina earlandi*, 24 *Globocassidulina biora*, 5 *Cibicides lobatulus*, 1 *Oolina sp.*, 1 *Lenticulina sp.*
Significance: This date is from massive diamicton.

Stratigraphy: Core contains diamicton with two layers of stratified diamicton. Core is interpreted as disturbed (possibly by icebergs).
Core Summary: The two dates from this core are reversed. This date may be erroneous in part, due to the use of mixed planktic and benthic forams to get enough weight for dating.

Reference: Anderson and Andrews, 1999

Core: IWSOE70 3-7-1 PC

Location: Weddell Sea, southeastern side of mid-continental shelf
Lat.: -75.417˚ **Long.:** -26.467˚ **Depth (mwd):** -235

Lab. ID: AA - 27756 **GRL**-1348-S **Depth (cm):** 200
Age: 26660 ± 490 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 20.5 **Genus:** *Cibicides* **Species:** *refulgens*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.5
Contributor: John B. Anderson
Sample Notes: 100 *Cibicides refulgens*
Significance: Date gives age of glacial marine sedimentation. Date is from gravelly sand overlying a sandy, pebbly mud.

Lab. ID: AA - 27757 **GRL**-1349-S **Depth (cm):** 400
Age: 13640 ± 130 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 19.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.5
Contributor: John B. Anderson
Sample Notes: 88 *Cibicides grossepunctaatus*, 87 *C. refulgens*, 6 *Cibicides lobatulus*
Significance: Date gives age of glacial marine sedimentation. Date is from sandy, pebbly mud which overlies gravelly sand.

Core Summary: The two dates from this core are reversed. Note that the reported dates are incorrectly listed in the Anderson and Andrews (1999) publication.
Reference: Anderson and Andrews, 1999

Core: IWSOE70 3-17-1 PC

Location: Weddell Sea, northeastern, outer continental shelf
Lat.: -71˚ 00.0' **Long.:** -11.75˚ 75’ **Depth (mwd):** -418

Lab. ID: CAMS - 44865 **GRL**-1343-S **Depth (cm):** 203-208
Age: 14940 ± 70 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 7.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.B. Anderson
Sample Notes: 750 individuals
Significance: Gives age of glacial marine sedimentation on the continental shelf.

Lab. ID: CAMS - 44866 **GRL**-1344-S **Depth (cm):** 400-405
Age: 23870 ± 160 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 8.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)

δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: John B. Anderson
Sample Notes: 500 individuals
Significance: Gives age of glacial marine sedimentation on the continental shelf.

Stratigraphy: Date is from a stratified diamicton overlain by mud.
Core Summary: Chronology and lithofacies indicate that grounded ice did not advance across the continental shelf during the LGM.
Reference: Anderson and Andrews, 1999

ARCTIC OCEAN

Core: P189AR-P45

Location: Slope Beaufort Sea, west of the mouth of the Mackenzie River
Lat.: 70˚ 33.03' **Long.:** -141˚ 52.08' **Depth (mwd):** -405

Lab. ID: AA - 27751 **GRL**-1337-S **Depth (cm):** 6-7
Age: 7920 ± 110 **Corr. Age:** 7470 ± 110 **Material:** Foraminifera
Weight (mg): 3.6 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.786
Contributor: L. Phillips
Sample Notes: 70 *Neogloboquadrina pachyderma* (s.), 87 *Melonis zaandamae*, 64 *Islandiella norcrossi* , 50 *Cassidulina teretis*, 36 *Cassidulina reniforme*, 10 *Elphidium excavatum forma clavata*, 7 from other species

Lab. ID: AA - 24832 **GRL**-1309-S **Depth (cm):** 7-10
Age: 15,475 ± 95 **Corr. Age:** 15,025 ± 95 **Material:** Foraminifera
Weight (mg): 5.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -6.25
Contributor: L. Phillips
Sample Notes: 124 *Neogloboquadrina. pachyderma* (s.); 106 *Cassidulina teretis*, 89 *Melonis zaandamae*, 44 *Islandiella norcrossi*, 18 *Buccella frigida*, 6 *N. labradorica*, 11 *Cassidulina reniforme*, 7 from other species

Lab. ID: AA - 27752 **GRL**-1339-S **Depth (cm):** 15-20
Age: 7485 ± 150 **Corr. Age:** 7035 ± 150 **Material:** Foraminifera
Weight (mg): 6.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.029
Contributor: L. Phillips
Sample Notes: 172 *Melonis zaandamae*, 100 *Islandiella norcrossi*, 161 *Cassidulina teretis*, 11 *Nonionellina labradorica*, and 16 other species

Lab. ID: AA - 27753 **GRL**-1340-S **Depth (cm):** 163-164
Age: 8545 ± 160 **Corr. Age:** 8095 ± 160 **Material:** Mollusc
Weight (mg): 30.3 **Genus:** *Arca* **Species:** *glacialis*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.815
Contributor: L. Phillips
Sample Notes: *Arca glacialis*, one valve

Lab. ID: AA - 27754 **GRL**-1342-S **Depth (cm):** 225-226
Age: 9125 ± 185 **Corr. Age:** 8675 ± 185 **Material:** Mollusc
Weight (mg): 18.9 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 2.182

Contributor: L. Philipps
Sample Notes: fragments, cannot be identified

Lab. ID: AA - 24833 **GRL**-1310-S **Depth (cm):** 285-288
Age: 9680 ± 65 **Corr. Age:** 9230 ± 65 **Material:** Foraminifera
Weight (mg): 8.5 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0
Contributor: L. Phillips
Sample Notes: 125 *Neogloboquadrina pachyderma (s.),* 380 *Cassidulina teretis*, 340 *Islandiella norcrossi*, 100 *Cassidulina reniforme*, 76 *Elphidium excavatum forma clavata*, 29 *Melonis zaandamae*, 3 from other species

Lab. ID: AA - 24834 **GRL**-1311-S **Depth (cm):** 485-488
Age: 11,240 ± 140 **Corr. Age:** 10,790 ± 140 **Material:** Foraminifera
Weight (mg): 4.0 **Genus:** *Cassidulina* **Species:** *teretis*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.8
Contributor: L. Phillips
Sample Notes: 720 individuals

Core Summary: (JTA): The uppermost date is obviously too old and may represent foraminifera being brought down the slope by debris flows. Lower two dates suggest that the core covers the termination of the last glacial period and extends into the Younger Dryas cold interval of NW Europe. The foramineral assemblages, as represented by the extensive assemblages picked for the dates, are marked by several species notably *Cassidulina teretis*, which are not usually part of the deglacial faunas. This species and others, such as *Melonis zaandamae*, suggest the presence of modified Atlantic Water on the slope at this depth.

EASTERN CANADA

Baffin Bay

Core: HU74026-557PC

Location: Baffin Bay
Lat.: 67˚ 29.8' **Long.:** -60˚ 00.7’ **Depth (mwd):** -1436

Lab. ID: AA - 18391 **GRL**-1192-S **Depth (cm):** 174
Age: 12,680 ± 125 **Corr. Age:** 12,230 ± 125 **Material:** Mollusc
Weight (mg): ? **Genus:** *Nucula* **Species:** *tenuis*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.85
Contributor: Andrews/Aksu
Sample Notes: bivalve fragment

Core Summary: See Andrews et al., 1998.

Core: HU76029-025

Location: Baffin Bay
Lat.: 69˚ 12.3' **Long.:** -62˚ 25.5' **Depth (mwd):** -1910

Lab. ID: AA - 21751 **GRL**-1274-S **Depth (cm):** 199-202
Age: 31,710 ± 1900 **Corr. Age:** 31,260 ± 1900 **Material:** Foraminifera
Weight (mg): 3.3 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0
Sample Notes: 535 *Neoglobоquadrina pachyderma* (s.)
Significance: Date constrains Baffin Bay sedimentation rates; relates to age of "detrital carbonate layers" in Baffin Bay, noted as Facies A by Aksu (1981).

Stratigraphy: Date is from hemipelagic mud.
Core Summary: Comments (JTA): This core is located just north of Davis Strait and is described in detail by Aksu (1985). The date is much younger than expected. Aksu noted an upper carbonate unit in this core - this would appear to date from about 10-11 ka based on a date in Aksu (1985) and new date we have obtained. See Andrews et al., 1998.

Core: HU76029-033PC

Location: Baffin Bay
Lat.: 71˚ 20.0' **Long.:** -64˚ 16.0' **Depth (mwd):** -2207

Lab. ID: AA - 18387 **GRL**-1188-S **Depth (cm):** 380
Age: >42,000 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 7.2 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.18
Contributor: J.T. Andrews/A.E. Aksu
Sample Notes: 900 *Neoglobоquadrina pachyderma* (s.)

Core Summary: See Andrews et al., 1998.

Core: HU76029-034PC

Location: Baffin Bay
Lat.: 71˚ 46.1' **Long.:** -64˚ 22.2' **Depth (mwd):** -2275

Lab. ID: AA - 18388 **GRL**-1189-S **Depth (cm):** 36.5
Age: 12,370 ± 105 **Corr. Age:** 11,920 ± 105 **Material:** Foraminifera
Weight (mg): 7.9 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.76

Contributor: Andrews/Aksu
Sample Notes: 1300 *Neogloboquadrina* pachyderma (s.) specimens.

Lab. ID: AA - 18389 **GRL**-1190-S **Depth (cm):** 411.5
Age: >40,000 **Corrected Age:** **Material:** Foraminifera
Weight (mg): 5.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.58
Contributor: Andrews/Aksu
Sample Notes: 1200 *Neogloboquadrina pachyderma* sinistral specimens.

Core Summary: See Andrews et al., 1998.

Core: HU76029-036PC

Location: Baffin Bay
Latitude: 72˚ 33.8' **Long.:** -65˚ 52.4' **Depth (mwd):** -2336

Lab. ID: AA - 18390 **GRL**-1191-S **Depth (cm):** 316.5
Age: >44,000 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 7.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.90
Contributor: Andrews/Aksu
Sample Notes: 800 *Neogloboquadrina pachyderma* sinistral specimens.

Core Summary: See Andrews et al., 1998

Core: HU77029-017PC

Location: Baffin Bay
Latitude: 66˚ 54.09 **Long.:** -58˚ 17.71' **Depth (mwd):** -935

Lab. ID: AA - 18386 **GRL**-1187-S **Depth (cm):** 902
Age: 17,931 ± 210 **Corr. Age:** 17,481 ± 210 **Material:** Foraminifera
Weight (mg): 10.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.2
Sample Notes: 800 *Neogloboquadrina pachyderma (s.)*
Significance: Constrains sedimentation rates in this core, and helps date the Baffin Bay detrital carbonate layers.
Stratigraphy: The dated interval is 2 cm below AA-17388. The date was obtained to confirm the young age of the sediment.
Core Summary: (JTA): This core is located just north of Davis Strait and is described in detail by Aksu (1985). Dates in this core are much younger than expected. Aksu noted an upper carbonate unit in this core - this would appear to date from about 10-11 ka based on a date in Aksu (1985) and a new date we have obtained.
Reference: Andrews et al., 1998

Core: ODP Leg 105 Site

645C 001 H01

Location: central Baffin Bay
Latitude: 70˚ 27.43' **Long.:** -64˚ 39.26' **Depth (mwd):** -2001

Lab. ID: AA - 20725 **GRL**-1234-S **Depth (cm):** 92-95
Age: 13250 ± 280 **Corr. Age:** 12800 ± 280 **Material:** Foraminifera
Weight (mg): 3.0 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.53
Contributor: Frank Hall
Sample Notes: 272 *Neogloboquadrina pachyderma* sinistral, $\delta^{18}O$ = -1.743 ± 0.015‰
Significance: Date constrains sedimentation rate and age of sediments; relates to a revised chronology for this core site.
Stratigraphy: Date is from upper portion of Late Wisconsinan glacial-marine sediments in ODP core 645.

Core Summary: For more stratigraphic information, see Andrews,1993

Core: ODP Leg 105 Site

645C 001 H02

Location: central Baffin Bay
Latitude: 70˚ 27.43' **Long.:** -64˚ 39.26' **Depth (mwd):** -2001

Lab. ID: AA - 20726 **GRL**-1235-S **Depth (cm):** 72-75
Age: >41470 **Corr. Age:** **Material:** Planktonic Foraminifera
Weight (mg): 9.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.3
Contributor: Frank Hall

Sample Notes: 1000 *Neogloboquadrina pachyderma* (s.) $\delta^{18}O$ = 2.421±0.009‰
Significance: Date constrains sedimentation rate and age of sediments; relates to a revised chronology for this core site.
Stratigraphy: Date is from upper portion of Late Wisconsinan glacial-marine sediments in ODP core 645.
Core Summary: For more stratigraphic information, see Andrews,1993

Core: ODP Leg 105 Site

645C 001 H03

Location: central Baffin Bay
Lat.: 70˚ 27.43' **Long.:** -64˚ 39.26' **Depth (mwd):** -2001

Lab. ID: AA - 20727 **GRL**-1236-S **Depth (cm):** 119-122
Age: >44,060 **Corr. Age:** **Material:** Planktonic Foraminifera
Weight (mg): 10.0 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.5
Contributor: Frank Hall
Sample Notes: $\delta^{18}O = 2.804 \pm 0.007$‰
Significance: Date constrains sedimentation rate and age of sediments; relates to a revised chronology for this core site.
Stratigraphy: Date is from glacial-marine sediments in ODP core 645.
Core Summary: For more stratigraphic information, see Andrews,1993

Davis Strait

Core: HU87033-009PC

Location: Davis Strait / Labrador Sea
Lat.: 62 ˚ 30.99' **Long.:** -59 ˚ 26.82' **Depth (mwd):** -1437

Lab. ID: AA - 18382 **GRL**-1183-S **Depth (cm):** 650-652
Age: 20,780 ± 260 **Corr. Age:** 20,330 ± 260 **Material:** Foraminifera
Weight (mg): 12.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.01
Contributor: Andrews/Jennings/Barber
Significance: Date submitted to constrain the duration of DC-2.

Stratigraphy: Date is from immediately above DC-2 (=H-2).
Core Summary: See significance and post-analysis write-up for AA-20788 (DCB-1998); for more background on this well-studied core, see write-up for AA-15659 (AEJ-1995).
Reference: Andrews et al., 1998b

Core: HU75009-IV-058PC

Location: south of Davis Strait, central northern Labrador Sea
Lat.: 62˚ 46.0' **Long.:** -59˚ 22.0' **Depth (mwd):** -1057

Lab. ID: AA - 20728 **GRL**-1237-S **Depth (cm):** 50-51
Age: 26525 ± 360 **Corr. Age:** 26075 ± 360 **Material:** Foraminifera
Weight (mg): 15.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0
Contributor: J.T. Andrews

Sample Notes: 1000 planktonic foraminifera
Significance: Date constrains sedimentation rates and ages at this core site; IRD layers here relate to question of Heinrich event iceberg sources - Baffin Bay vs. Hudson Strait.

Lab. ID: AA - 20729 **GRL**-1238-S **Depth (cm):** 310-311
Age: 29990 ± 405 **Corr. Age:** 29540 ± 405 **Material:** Foraminifera
Weight (mg): 12.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.4
Contributor: J.T. Andrews
Sample Notes: 1400 planktonic foraminifera
Significance: Date constrains sedimentation rates and ages at this core site; IRD layers here relate to question of Heinrich event iceberg sources - Baffin Bay vs. Hudson Strait.

Lab. ID: AA - 20730 **GRL**-1239-S **Depth (cm):** 400-401
Age: 31040 ± 1820 **Corr. Age:** 30590 ± 1820 **Material:** Foraminifera
Weight (mg): 10.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.2
Contributor: J.T. Andrews
Sample Notes: 1400 planktonic foraminifera
Significance: Date constrains sedimentation rates and ages at this core site; IRD layers here relate to question of Heinrich event iceberg sources - Baffin Bay vs. Hudson Strait.

Stratigraphy: Sample is from glacial-marine/hemipelagic sediment interbedded w/ layers of moderately abundant IRD.
Core Summary: See write-up in Kirby, 1996

Hudson Strait

Core: HU93034-002PC

Location: Eastern basin, Hudson Strait
Lat.: 60˚ 56.78’ **Long.:** -65˚ 41.98’ **Depth (mwd):** -822

Lab. ID: CAMS - 28664 **GRL**-1264-S **Depth (cm):** 380-399
Age: 10,030 ± 80 **Corr. Age:** 9,580 ± 80 **Material:** mixed carbonate
Weight (mg): 2.2 **Genus:**see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0
Contributor: A.E. Jennings/W. Manley
Sample Notes: Mixed benthic and planktonic foraminifera, ostracods and molluscs. 4 scallop valves, 14 *Actinopsida sp.* valves, 76 *Cytheropteron sp*. valves, 91 *Elphidium excavatum* forma *clavata*, 49 *Cassidulina teretis*, 53 *Stainforthia concava*, 24 *Neogloboquadrina pachyderma* (s.), 22 *Pyrgo sp*., 21 *Cassidulina reniforme*, 8 *Islandiella norcrossi*, 3 *Robertinoides sp*., 3 *Cibicides lobatulus*, 2 *Astrononion gallowayi*, 2 *Elphidium sp*., 1 *Quinqueloculina sp*.

Stratigraphy: From muddy glacial-marine sediment well below the apparent glacial/postglacial boundary in the core.
Significance: Constrains sedimentation rates in this core. By comparison with other dates and cores in the area, the reported age may be erroneously old, possibly resulting from reworked shells in the dated sample.

Core Summary: Comment (AEJ & BM): Sediments at the core site are interpreted from high resolution seismic data to represent the basal part of the glacial marine section in the floor of the Eastern Basin. These sediments are deeply buried in general, but are accessible at this locality. This 7 m core from the northeastern margin of the Eastern Basin penetrated all but ca. 1 m of the glacial-marine sediment overlying till. AA- 17391 on foraminifera and AA-13172 on a mollusc valve come from a magnetic susceptibility peak in the upper high MS interval which appeared to correlate with an MS peak in 92028-158 (Jennings et al., 1995). CAMS-25758, the date from the earliest foraminiferal peak in the core, obtained from two meters deeper in the core, indicated that the MS peak is derived from reworked sediments deposited near the end of the glacial-marine interval, and that the glacial-marine section is actually much younger. However, other dates from Eastern Basin cores suggest that the 8.2 ka date CAMS-25758 is too young by ca. 0.4 ka. We tested this suspicion with this date (CAMS-28664) from slightly deeper in 93034-002. However, this date appears instead to be erroneously old, possibly from inclusion of reworked shells.

Reference: Jennings et al., 1996.

Hatton Basin

Core: HU92028-158PC

Location: Hatton Basin, southern Baffin Island shelf

Lat.: 61˚ 0.00’	**Long.:** -62˚ 55.57’	**Depth (mwd):** -622
Lab. ID: AA - 20731	**GRL**-1240-S	**Depth (cm):** 8-10
Age: 5210 ± 510	**Corr. Age:** 4760 ± 510	**Material:** Foraminifera
Weight (mg): 7.3	**Genus:** *Neogloboquadrina*	**Species:** *pachyderma* (s.)
δ^{13}**C:** Measured	δ^{13}**C (‰):** +.07	

Contributor: A.E. Jennings
Sample Notes: 1000 *Neogloboquadrina pachyderma* (s). $\delta^{18}O$ = 0.78 ± 0.01‰
Stratigraphy: Very near the core top.
Significance: This date indicates thin postglacial sediments are present at the site.

Core Summary: Foraminiferal data and the date confirm presence of thin (ca. 20 cm) postglacial sediments in the core. Also see CAMS-25763; slightly younger age right at the core top. For entire core write-up, see comment AA-15698 (Manley and Jennings, 1996).

Labrador Sea

Core: HU97048-007PC

Location: NW Labrador Sea, SE Baffin Island, east-southeast of mouth of Cumberland Sound

Lat.: 62˚ 40.383' **Long.:** -60˚ 34.388' **Depth (mwd):** -945

Lab. ID: AA - 31260 **GRL**-1458-S **Depth (cm):** 207-211
Age: 14660 ± 120 **Corr. Age:** 14210 ± 120 **Material:** Foraminifera
Weight (mg): 11.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.177
Contributor: D.C. Barber
Sample Notes: 1000 *Neogloboquadrina pachyderma* (sinistral)
Significance: Measured age suggests that the Detrital Carbonate layer immediately above the dated interval is correlative to DC1, which correlates with Heinrich layer 1 in the North Atlantic. Date is from hemipelagic mud just below a detrital carbonate layer.

Lab. ID: AA - 27758 **GRL**-1350-S **Depth (cm):** 279-283
Age: 17624 ± 160 **Corr. Age:** 17174 ± 160 **Material:** Foraminifera
Weight (mg): 9 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.002
Contributor: D.C. Barber
Sample Notes: 800 *Neogloboquadrina pachyderma* (sinistral)
Significance: This date constrains sedimentation rates in the core, and provides a younger bounding age on the deposition of a layer of dark-grey, IRD-rich material which in turn overlies a detrital carbonate layer equivalent to Heinrich layer 2. This date supports the correlation of a detrital carbonate layer/black facies layer couplet occurring close to, or simultaneously with, the time of Heinrich layer 2 in the North Atlantic. Date is from hemipelagic mud, several tens of cm above the top of a dark-grey IRD-rich layer.

Lab. ID: AA - 31269 **GRL**-1469-S **Depth (cm):** 351-356
Age: 21370 ± 270 **Corr. Age:** 20920 ± 270 **Material:** Foraminifera
Weight (mg): 8.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.043
Contributor: D.C. Barber
Sample Notes: 900 *Neogloboquadrina pachderma* (sinistral)
Significance: This age confirms that the overlying DC unit is the temporal correlative with Heinrich layer 2 in the North Atlantic. Date is from hemipelagic mud immediately below the sharp basal contact of a detrital carbonate-rich layer.

Lab. ID: AA - 27759 **GRL**-1351-S **Depth (cm):** 715-718
Age: 35290 ± 880 **Corr. Age:** 34840 ± 880 **Material:** Foraminifera
Weight (mg): 10.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)

δ^{13}**C:** Measured δ^{13}**C (‰):** 0.509
Contributor: D.C. Barber
Sample Notes: 700 *Neogloboquadrina pachyderma* (sinistral)
Significance: Constrains sedimentation rates in this core, and is from near the chronostratigraphic level for Heinrich layer 4. This is age near the upper end of practical radiocarbon dating, so should be used with caution. Date is from a sandy, foram-rich unit overlying an IRD-rich layer. Bioturbated hemipelagic mud overlies the dated interval.

Core Summary: (DCB): The ^{14}C dates, lithofacies and stratigraphic relationships in this core suggest that an ice stream in Cumberland Sound produced pulses of sediment deposition, on a similar pacing as for the detrital carbonate layers produced from Hudson Strait. At least 4 layers of dark-grey, IRD-rich sediment occur within the sediments deposited from 8 - 40 ka at this coresite. Four detrital carbonate-rich layers are also found within this section of the core, but the exact phasing and/or duration between the two types of deposits remains uncertain.

Core: IMP 76-2-1PC

Location: NW Labrador Sea, SE Baffin Island slope, offshore Cumberland Sound.
Lat.: 63˚ 20.55' **Long.:** -59˚ 10.58' **Depth (mwd):** -920

Lab. ID: AA - 18383 **GRL**-1184-S **Depth (cm):** 162
Age: 15,125 ± 155 **Corr. Age:** 14,675 ± 155 **Material:** Foraminifera
Weight (mg): 9.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.32
Contributor: Andrews, J.T.
Sample Notes: 900 specimens submitted.
Significance: Constrains timing of ice-sheet/ocean interactions between the NE sector of the Laurentide ice sheet and the Labrador Sea.

Stratigraphy: Date is from hemipelagic mud below a detrital carbonate layer.
Core Summary: See discussion in Andrews et al., 1998b

Core: HU87033-009

Location: NW Labrador Sea, SE Baffin Island slope, southeast of mouth of Cumberland Sound
Lat.: 62˚ 31.0' **Long.:** -59˚ 27.0' **Depth (mwd):** -1437

Lab. ID: AA - 20788 **GRL**-1182-S **Depth (cm):** 600-602
Age: 19,290 ± 180 **Corr. Age:** 18,840 ± 180 **Material:** Foraminifera
Weight (mg): 10.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.33
Contributor: D.C. Barber
Sample Notes: δ^{18}O = 3.207±0.012‰

Significance: This date constrains the sedimentation rate on the SE Baffin Island slope after DC/Heinrich event 2, but before DC/H-1. The apparent sed. rate prior to H-2 was about 20 cm/ka, whereas during H-2 the sed. rate increased to 150-180 cm/ka. The sed. rate calculated from top of H-2 (652 cm) to this date at 601 cm = 34 cm/ka. This suggests that the local sediment flux increased significantly during H-2, and then decreased soon after the event. This date is from the hemipelagic or "ambient glacial sedimentation" interval between DC-2 and DC-1, and lies 50 cm above the top of DC-2.

Lab. ID: AA - 18382 **GRL**-1183-S **Depth (cm):** 650-652
Age: 20,780 ± 260 **Corr. Age:** 20,330 ± 260 **Material:** Foraminifera
Weight (mg): 12.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.01
Contributor: Andrews/Jennings/Barber
Stratigraphy: Date is from immediately above DC-2 (=H-2).
Significance: Date submitted to constrain the duration of DC-2.

Core Summary: (DCB): The dates from the portion of core -009 enclosing H-2 (ca. 550 - 750 cm) are remarkably coherent; i.e., this interval lacks stratigraphic reversals and the sed. rates, although not constant, change in ways that we would predict. This chronological coherence lends credence to interpretations based on these dates regarding the duration of H-2 = 300 +/- 250 years; this rather short duration for the "archetypical" Heinrich event implies a catastrophic drawdown of the Laurentide ice sheet through Hudson Strait, possibly in the manner modeled by MacAyeal (1993). The base of core is in IRD-rich hemipelagic and/or glacial-marine sediments deposited during Detrital Carbonate layer 3 (which may relate either to Heinrich event 3 or 4). The core contains DC-0, -1, -2, and -3.

Reference: Andrews, et al., 1998b

Labrador Shelf

Core: HU77021-063PC

Location: Labrador Shelf, Karlsefni Trough
Lat.: 58˚ 45.45' **Long.:** -61˚ 04.14' **Depth (mwd):** -200

Lab. ID: AA - 18384 **GRL**-1185-S **Depth (cm):** 830-846
Age: 11,595 ± 95 **Corr. Age:** 11,145 ± 95 **Material:** Foraminifera
Weight (mg): 8.9 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.4
Contributor: Jennings/Andrews
Sample Notes: 128 benthic foraminifera specimens. Some pyritization. Note that species is "deeply infaunal" in its life habitat.
Significance: Constrains sedimentation rates and provides limiting age for deglaciation site.

Stratigraphy: Date is from near base of core in glacial-marine mud.
Core Summary: See Hall et al., 1999 and Veldhuyzen, H. 1981.

Core: HU87033-015PC

Location: Labrador shelf offshore Saglek Fjord, eastern Labrador
Lat.: 58˚ 45.83' **Long.:** -62˚ 15.39' **Depth (mwd):** - 188

Lab. ID: AA - 18392 **GRL**-1193-S **Depth (cm):** 480-509
Age: 11,028 ± 98 **Corr. Age:** 10,578 ± 98 **Material:** Ostracod
Weight (mg): 13.7 **Genus:** *Elofsonella* **Species:** *concinna*
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.8
Contributor: A.E. Jennings
Sample Notes: 190 valves
Significance: Constrains sedimentation rates in this core and the timing of rapid deposition events (probably derived from a Hudson Strait ice margin).

Stratigraphy: Date is from glacial marine mud.
Core Summary: (JTA): This giant piston core was recovered from a basin on the northern Labrador shelf. Work is in progress on the rock magnetic properties and stratigraphy (F. Hall, Univ. of Delaware). The date at 444 cm (AA-14207; 8.2 ka) marks the transition from high to low magnetic susceptibility (MS) values. The basal date of > 42 ka on mixed species of benthic foraminifera was taken from another low MS interval. Rates of sediment accumulation were rapid between 444 and 88 cm and reworking of sediments is indicated by dating reversals. Additional samples from < 1000 cm and >400 cm are being prepared for radiocarbon dating. The dates of ca. 8 ka BP agree with other dates obtained from cores in Karlsefni Trough (Veldhuyzen, 1981), on the northern Labrador shelf.

Core: HU87033-017TWC

Location: Cartwright Saddle, Labrador Shelf
Lat.: 54˚ 36.99' **Long.:** -56˚ 10.60' **Depth (mwd):** -514

Lab. ID: AA - 21742 **GRL**-1265-S **Depth (cm):** 0-5
Age: 460 ± 90 **Corr. Age:** preBomb **Material:** mixed benthics forams
Weight (mg): 3.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.1
Contributor: Hall/Andrews/Jennings
Sample Notes: 75 *Nonionellina labradorica*, 10 *Globobulimina auriculata*, 11 *Buccella tenerrima*
Significance: The reported age implies that relatively continuous sedimentation occurred at the coresite nearly to the present. The sediment accumulation rate in the upper 2-3 m of recovered sediment was much slower than for the lower 8-10 m of the core. Date is from the top of the trigger-weight core.

Lab. ID: AA - 21743 **GRL**-1266-S **Depth (cm):** 100-102
Age: 2,030 ± 55 **Corr. Age:** 1,580 ± 55 **Material:** mixed benthic forams
Weight (mg): 5.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.7
Contributor: Hall/Andrews/Jennings
Sample Notes: 112 *Nonionellina labradorica*, 66 *Globobulimina auriculata*
Significance: Date is from near the base of the trigger-weight core. The reported date implies that the trigger-weight core and the top of the LCF core recovered overlapping parts of the sediment column.

Core Summary: See comment for AA-16750 (JTA). Note that depth/age relationships for this core are extremely similar to those in HU87033-018 (see comment for AA-26517).
Reference: Andrews et al., 1999

Core: HU87033-017LCF

Location: Cartwright Saddle, Labrador Shelf
Lat.: 54˚ 36.99' **Long.:** -56˚ 10.60' **Depth (mwd):** -514

Lab. ID: AA - 21744 **GRL**-1267-S **Depth (cm):** 0-2
Age: 765 ± 55 **Corr. Age:** 315 ± 55 **Material:** benthics forams
Weight (mg): 3.8 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.4
Contributor: Hall/Andrews/Jennings
Sample Notes: 200 *Nonionellina labradorica*
Significance: The reported age implies that relatively continuous sedimentation occurred at the coresite nearly to the present, and that the LCF did not lose much of the uppermost sediment column. The sediment accumulation rate in the upper 2-3 m of recovered sediment was much slower than for the lower 8-10 m of the core. Date is from the top of the core.

Lab. ID: AA - 21745 **GRL**-1268-S **Depth (cm):** 250-252
Age: 6,185 ± 55 **Corr. Age:** 5,735 ± 55 **Material:** mixed benthics forams
Weight (mg): 8.4 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.2
Contributor: Hall/Andrews/Jennings
Sample Notes: 221 *Nonionellina labradorica*, 97 *Buccella tenerrima*
Significance: Constrains postglacial sedimentation rates in the core. Date is from bioturbated gray mud.

Core Summary: See comment for AA-16750 (JTA). Note that depth/age relationships for this core are extremely similar to those in HU87033-018 (see comment for AA-26517).
Reference: Andrews et al., 1999

Core: HU87033-018TWC

Location: Cartwright Saddle, Labrador Shelf
Lat.: 54˚ 44.71' **Long.:** -56˚ 03.05' **Depth (mwd):** -460

Lab. ID: AA - 21746 **GRL**-1269-S **Depth (cm):** 0-2
Age: 650 ± 65 **Corr. Age:** preBomb **Material:** mixed benthic forams
Weight (mg): 2.3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.9
Contributor: Hall/Andrews/Jennings
Sample Notes: 70 *Nonionellina labradorica,* 10 *Globobulimina sp.,* 9 *Buccella tenerrima,* 25 *Melonis zaandamae*
Significance: Constrains age of uppermost sediment recovered at this site. Implies more-or-less continuous sedimentation at the site, although the post-glacial sedimentation rates after 6 ka were much slower than prior to that time. From hemipelagic mud at top of TWC.

Lab. ID: AA - 21747 **GRL**-1270-S **Depth (cm):** 100-103
Age: 2,815 ± 75 **Corr. Age:** 2,365 ± 75 **Material:** mixed benthic forams
Weight (mg): 2.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.6
Contributor: Hall/Andrews/Jennings
Sample Notes: 99 *Nonionellina labradorica*, 12 *Globobulimina auriculata*, 32 *Buccella tenerrima*
Significance: Constrains postglacial sedimentation rates at this site. Implies relatively slow late Holocene sedimentation rates. Date is from hemipelagic mud.

Core Summary: See comment for AA-26517 (JTA). Note that depth/age relationships for this core are extremely similar to those in HU87033-017 (See comment for AA-16750).
Reference: Andrews et al., 1999

Core: HU87033-018LCF

Location: Cartwright Saddle
Lat.: 54˚ 47.71' **Long.:** -56˚ 03.05' **Depth (mwd):** -460

Lab. ID: AA - 21748 **GRL**-1271-S **Depth (cm):** 4-5
Age: 860 ± 65 **Corr. Age:** 410 ± 65 **Material:** benthic forams
Weight (mg): 3.2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.1
Contributor: Hall/Andrews/Jennings
Sample Notes: 151 *Nonionellina labradorica*

Significance: Constrains age of uppermost sediment recovered in the LCF piston core. Implies nearly continuous (albeit slower) sedimentation following the glacial/postglacial transition. Date is from hemipelagic mud near top of piston-core.

Lab. ID: AA - 21749 **GRL**-1272-S **Depth (cm):** 250-251
Age: 5,685 ± 70 **Corr. Age:** 5,235 ± 70 **Material:** mixed benthic forams
Weight (mg): 7.4 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.7
Contributor: Hall/Andrews/Jennings
Sample Notes: 250 *Nonionellina labradorica*, 50 *Buccella tenerrima*, 12 *Globobulimina auriculata*
Significance: Constrains sedimentation rates at this site; this date implies that Holocene sedimentation rates post-6 ka were much slower than before that time. Date is from hemipelagic marine mud.

Lab. ID: AA - 26517 **GRL**-1334-S **Depth (cm):** 1316
Age: 12,535 ± 140 **Corr. Age:** 12,085 ± 140 **Material:** Foraminifera
Weight (mg): 5.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.36
Contributor: Andrews/Hall/Jennings
Sample Notes: 717 individuals of *Neoqloboquadrina pachyderma* (sinistral).
Significance: Constrains age of lower-most sediments retrieved in this core. Date is from hemipelagic/glacial-marine mud near base of core.

Core Summary: See comment for AA-26517 (JTA). Note that depth/age relationships for this core are extremely similar to those in HU87033-017 (See comment for AA-16750).
Reference: Andrews et al., 1999

Core: HU87033-019PC

Location: southern Labrador shelf / northern Newfoundland shelf
Lat.: 50˚ 54.51' **Long.:** -53˚ 15.63' **Depth (mwd):** -453

Lab. ID: AA - 21750 **GRL**-1273-S **Depth (cm):** 503-505
Age: 10,300 ± 300 **Corr. Age:** 9,850 ± 300 **Material:** Foraminifera
Weight (mg): 6.4 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.T. Andrews
Sample Notes: 201 *Nonionellina labradorica*, 11 *Globobulimina auriculata*

Core Summary: This date defines a major shift in the magnetic susceptibility record from this site (Vilks and Powell, 1987). The date occurs close to the end of the Younger Dryas chronozone and in Newfoundland there is evidence that glaciers expanded during this interval along the northern peninsula (JTA).

Nova Scotia Shelf

Core: HU87003-004

Location: Emerald Basin, Nova Scotia shelf
Lat.: 43˚ 53.1' **Long.:** -62˚ 47.7' **Depth (mwd):** -235

Lab. ID: AA – 20789 **GRL**-1247-S **Depth (cm):** 375-377
Age: 12,555 ± 750 **Corr. Age:** 12,105 ± 750 **Material:** Benthic Foraminifera
Weight (mg): 3 **Genus:** *Elphidium* **Species:** *excavatum*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.1
Contributor: Frank Hall
Sample Notes: 300 *Elphidium excavatum forma clavata* $\delta^{18}O$ =0.56± 0.016‰

Lab. ID: AA – 20790 **GRL**-1248-S **Depth (cm):** 450-452
Age: 11795 ± 85 **Corr. Age:** 11345 ± 85 **Material:** Foraminifera
Weight (mg): 6.3 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.91
Contributor: Frank Hall
Sample Notes: 300 benthic foraminifera $\delta^{18}O$ = 1.619 ± 0.002‰

Stratigraphy: Oxygen isotopic composition of benthic foraminifera from this interval are ~ 1 per mill heavier than at 376 cm in this core. No other information provided.
Core Summary: The lower date in this core is ~750 years younger than that from 376 cm (AA-20789). The error on this lower date (AA-20790) is much smaller (+/- 85 yrs) than for the overlying older date. It is unclear whether the reversal created by the older overlying date resulted from the dating of re-worked forams, or whether it implies rapid sedimentation at a time when there are known plateaus in the ^{14}C timescale.

DENMARK STRAIT

North Denmark Strait

Core: JM96-1228/1-GC

Location: Denmark Strait (North)
Lat.: 65˚ 02' **Long.:** 25˚ 06' **Depth (mwd):** -1079

Lab. ID: AA - 31270 **GRL**-1471-S **Depth (cm):** 26-28
Age: 11,015 ± 85 **Corr. Age:** 10,465 ± 85 **Material:** Foraminifera
Weight (mg): 6.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.307
Contributor: S. Hagen
Sample Notes: 1900 individuals

Lab. ID: AA – 29218 **GRL**-1415-S **Depth (cm):** 94-96
Age: 12,355 ± 95 **Corr. Age:** 11,905 ± 95 **Material:** Foraminifera
Weight (mg): 6.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.211
Contributor: S. Hagen
Sample Notes: 800 individuals.

Lab. ID: AA – 29219 **GRL**-1416-S **Depth (cm):** 160-162
Age: 12,890 ± 90 **Corr. Age:** 12,430 ± 90 **Material:** Foraminifera
Weight (mg): 6.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.113
Contributor: S. Hagen
Sample Notes: 800 individuals.

Lab. ID: AA - 31271 **GRL**-1472-S **Depth (cm):** 232-234
Age: 19,790 ± 240 **Corr. Age:** 19,240 ± 240 **Material:** Foraminifera
Weight (mg): 11.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.022
Contributor: S. Hagen
Sample Notes: 900 individuals.

Lab. ID: AA - 31272 **GRL**-1473-S **Depth (cm):** 252-254
Age: 17,010 ± 130 **Corr. Age:** 16460 ± 130 **Material:** Foraminifera
Weight (mg): 8.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.202
Contributor: S. Hagen
Sample Notes: 950 individuals.

Core Summary: This core is from the northern slope of Denmark Strait. It was used as part of a study by Hagen (1999) of the last deglaciation of the Denmark Strait area.

Core: JM96-1229/1-GC

Location: Denmark Strait (North)
Lat.: 67˚ 01.03' **Long.:** -25˚ 09.02' **Depth (mwd):** -1047

Lab. ID: AA - 29187 **GRL**-1384-S **Depth (cm):** 27-29
Age: 10,910 ± 140 **Corr. Age:** 10,460 ± 140 **Material:** Foraminifera
Weight (mg): 8.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.113
Sample Notes: 460 picked

Lab. ID: AA - 29188 **GRL**-1385-S **Depth (cm):** 31-35
Age: 10,870 ± 140 **Corr. Age:** 10,420 ± 140 **Material:** Foraminifera
Weight (mg): 3.4 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.202
Sample Notes: 400 picked

Lab. ID: AA - 29189 **GRL**-1386-S **Depth (cm):** 65-67
Age: 11,520 ± 140 **Corr. Age:** 11,070 ± 140 **Material:** Foraminifera
Weight (mg): 3.3 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.337
Sample Notes: 400 picked

Lab. ID: AA - 29190 **GRL**-1387-S **Depth (cm):** 75-77
Age: 12,500 ± 120 **Corr. Age:** 12,050 ± 120 **Material:** Foraminifera
Weight (mg): 5.0 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.096
Sample Notes: 700 picked

Lab. ID: AA - 29191 **GRL**-1388-S **Depth (cm):** 109-111
Age: 12,845 ± 90 **Corr. Age:** 12,395 ± 90 **Material:** Foraminifera
Weight (mg): 6.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.239
Sample Notes: 800 picked

Lab. ID: AA - 31250 **GRL**-1446-S **Depth (cm):** 205-207
Age: 24,290 ± 240 **Corr. Age:** 23,890 ± 240 **Material:** Foraminifera
Weight (mg): 8.4 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.013
Sample Notes: 1000 forams picked.

Lab. ID: AA - 31249 **GRL**-1445-S **Depth (cm):** 149-151

Age: 12,560 ± 85 **Corr. Age:** 12,160 ± 85 **Material:** Foraminifera
Weight (mg): 7.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.255
Sample Notes: 1200 forams picked.

Lab. ID: CAMS - 44859 **GRL**-1326-S **Depth (cm):** > 265
Age: 31,320 ± 380 **Corr. Age:** 30,870 ± 380 **Material:** Foraminifera
Weight (mg): 7.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: Stephanie Cartee
Sample Notes: 800 picked

Core Summary: This core is located north of the Denmark Strait sill in a basin below Djúpáll. The dates indicate that the core recovered sediments during during MIS3 and 2, including the LGM. The upper 20 cm of sediment represents Holocene sedimentation but we have not yet determined the age of the core top. This core is described in detail in the MSc thesis of Cartee-Schoolfield (in prep).

Iceland Slope

Core: JM96-1221/2-GC

Location: Iceland Slope, west of Latra moraine**.**
Lat.: 65˚ 07.9 **Long.:** -27˚ 32.2' **Depth (mwd):** -483

Lab. ID: AA - 31237 **GRL**-1433-S **Depth (cm):** 0-2
Age: 8,120 ± 60 **Corr. Age:** 7,720 ± 60 **Material:** Foraminifera
Weight (mg): 9.5 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰): 0.877**
Sample Notes: 72 *Cibicides lobatulus*
Significance: Top of core.

Lab. ID: AA - 31239 **GRL**-1435-S **Depth (cm):** 68-70
Age: 15,140 ± 110 **Corr. Age:** 14,740 ± 110 **Material:** Echinoid
Weight (mg): 6.8 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.822
Sample Notes: Echinoid skeletal parts used because planktic foraminifera full of sediment even after 24 hours of sonication
Significance: Base of a pebbly layer, low in mass magnetic susceptibility (38 x 10-8 m3/g)

Lab. ID: AA - 31240 **GRL**-1436-S **Depth (cm):** 114-116
Age: 17,230 ± 120 **Corr. Age:** 16,830 ± 120 **Material:** Benthic Foraminifera
Weight (mg): 11.7 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.130

Sample Notes: 2 *Pyrgo sp.*, 48 *Quinqueloculina seminulum*, 1 *Dentalina sp.*
Significance: Sampled from a granuly mud with a peak in mass magnetic susceptibility (78 x 10^{-8} m^3/g)

Lab. ID: AA - 31241 **GRL**-1437-S **Depth (cm):** 124-126
Age: 16,710 ± 110 **Corr. Age:** 16,160 ± 110 **Material:** Mollusc
Weight (mg): 10.6 **Genus:** *Yoldia* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 2.211
Sample Notes: bivalve
Significance: Top of a granuly mud unit with visible forams, a moderate low in mass magnetic susceptibility of 50 x 10-8 m3/g.

Lab. ID: AA - 31268 **GRL**-1467-S **Depth (cm):** 158-160
Age: 19,750 ± 180 **Corr. Age:** 19,350 ± 180 **Material:** Benthic Foraminifera
Weight (mg): **Genus:** *Quinqueloculina* **Species:** *seminulum*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.459
Sample Notes: 83 *Quinqueloculina seminulum*

Lab. ID: CAMS - 44858 **GRL**-1325-S **Depth (cm):** > 185
Age: 18,240 ± 80 **Corr. Age:** 17,840 ± 80 **Material:** Foraminifera
Weight (mg): 7.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: Stephanie Cartee
Sample Notes: 600 counted
Significance: core catcher, bottom of core

Core Summary: Selected to assist in the development of a chronological history of sedimentation in the core, as well as to assist in correlation with other, proximal cores such as JM96-1222, JM96-1226 and HU93-030-007. The basal date will be used to develop chronology of sedimentation and to calculate sedimentation rate. Date similar to that from JM96-1220GGC (this date list) and a similar comment is appropriate. No surface sediment older than ~ 8 ka was retrieved either due to loss of the upper sediment or non-deposition. This core is described in detail in Cartee-Schoolfield (in prep).

Snorri Drift

Core: JM96-1220/2-GC

Location: Snorri Drift
Lat.: 65˚ 00' **Long.:** -27˚ 30’ **Depth (mwd):** -514

Lab. ID: CAMS - 44857 **GRL**-1324-S **Depth (cm):** 187
Age: 18,090 ± 80 **Corr. Age:** 17,690 ± 80 **Material:** Foraminifera
Weight (mg): 15.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)

δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: Stephanie Cartee
Sample Notes: 1100 picked
Significance: Date indicates that relatively little sediment accumulated on the upper Iceland slope seaward of the Latra Moraine during the LGM. Sample taken from the core cutter.

Core: JM96-1222/1-GC

Location: Snorri Drift South Denmark Strait, eastern side, in Snorri Drift
Lat.: 65˚ 25' **Long.:** -28˚ 25' **Depth (mwd):** -1045

Lab. ID: AA - 31242 **GRL**-1438-S **Depth (cm):** 0-2
Age: 10,590 ± 70 **Corr. Age:** 10,190 ± 70 **Material:** Foraminifera
Weight (mg): 8.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.525
Sample Notes: sediment reddish in part. Forams- some white, yellow, orange, picked only white. 800 forams picked

Lab. ID: AA - 31243 **GRL**-1439-S **Depth (cm):** 36-38
Age: 13,735 ± 85 **Corr. Age:** 13,335 ± 85 **Material:** Foraminifera
Weight (mg): 10.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.062
Sample Notes: 915 forams picked

Lab. ID: AAR - 3517 **GRL**-1291-S **Depth (cm):** > 68
Age: 15,690 ± 110 **Corr. Age:** 15,290 ± 110 **Material:** Foraminifera
Weight (mg): 12.0 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C** (‰): -0.14
Sample Notes: 800 picked

Core Summary: The whole core magnetic susceptibility records from JM96-1222GGC/1 and 2 allow a correlation between the two sites which indicates a very close match between them in terms of depth. Hence this site records sedimentation on the Iceland slope of Denmark Strait for at least the last 23,000 years. No sediment was recovered for the last 10,000 years either because of no recovery or little net sediment accumulation during the Holocene.

South Denmark Strait

Core: JM96-1225/1-GC

Location: Denmark Strait (South)
Lat.: 65˚ 54.3' **Long.:** 29˚ 17.4' **Depth (mwd):** -1683

Lab. ID: AA - 29214 **GRL**-1411-S **Depth (cm):** 57-58
Age: 15,380 ± 130 **Corr. Age:** 14,930 ± 130 **Material:** Foraminifera
Weight (mg): 8.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.202
Contributor: S. Hagen
Sample Notes: 750 individuals.

Core Summary: see core summary core JM96-1225/2-GC.

Core: JM96-1225/2-GC

Location: Denmark Strait (South)
Lat.: 65˚ 54.3 **Long.:** 29˚ 17.4' **Depth (mwd):** -1683

Lab. ID: AA - 29215 **GRL**-1412-S **Depth (cm):** 160-162
Age: 25,530 ± 250 **Corr. Age:** 25,080 ± 250 **Material:** Foraminifera
Weight (mg): 9.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0417
Contributor: S. Hagen
Sample Notes: 800 individuals.

Lab. ID: AA - 29216 **GRL**-1413-S **Depth (cm):** 230-232
Age: 31,430 ± 530 **Corr. Age:** 30,980 ± 530 **Material:** Foraminifera
Weight (mg): 12.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** .495
Contributor: S. Hagen
Sample Notes: 800 individuals.

Lab. ID: AA - 29217 **GRL**-1414-S **Depth (cm):** 320-322
Age: 40,200 ± 2600 **Corr. Age:** 39,750 ± 2600 **Material:** Foraminifera
Weight (mg): 8.3 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.183
Contributor: S. Hagen
Sample Notes: 800 individuals.

Core Summary: This core is from the slope, south of the Denmark Strait, near HU93030-007LCF (Andrews et al., 1998c). Hagen (1999) analyzed variations in sea surface temperatures (based on planktonic foraminifera assemblage data) and deepwater circulation using benthic foraminifera during MIS 2 and 3. The timescale was based on the radiocarbon dates, as well as tephras.

Core: JM96-1226/4-GC

Location: Denmark Strait (South), base of slope, adjacent to Kangerlussuaq Trough
Lat.: 65˚ 11.8' **Long.:** -29˚ 00' **Depth (mwd):** -1519

Lab. ID: AA - 29192 **GRL**-1389-S **Depth (cm):** 4-6
Age: 9,590 ± 100 **Corr. Age:** 9,040 ± 110 **Material:** Benthic Foraminifera
Weight (mg): 4.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.730
Sample Notes: 17 *Pyrgo sp.* and 2 *Glandulina sp.*

Lab. ID: AA - 31244 **GRL**-1440-S **Depth (cm):** 24-26
Age: 13,085 ± 85 **Corr. Age:** 12,535 ± 85 **Material:** Foraminifera
Weight (mg): 7.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.116
Sample Notes: avoided forams with dark spots inside. 700 forams picked

Lab. ID: AA - 31245 **GRL**-1441-S **Depth (cm):** 54-56
Age: 15,520 ± 120 **Corr. Age:** 14,970 ± 120 **Material:** Foraminifera
Weight (mg): 9.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.194
Sample Notes: avoided ones with dark spots inside. 600 forams picked

Lab. ID: AA - 31246 **GRL**-1442-S **Depth (cm):** 116-118
Age: 18,820 ± 160 **Corr. Age:** 18,270 ± 160 **Material:** Foraminifera
Weight (mg): 10.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.234
Sample Notes: carefully picked only clean *Neogloboquadrina pachyderma* (s.), 600 specimens

Lab. ID: AA - 31247 **GRL**-1443-S **Depth (cm):** 144-146
Age: 21,410 ± 160 **Corr. Age:** 20,860 ± 160 **Material:** Foraminifera
Weight (mg): 12.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.161
Comment: 900 forams picked.

Lab. ID: AA - 29193 **GRL**-1390-S **Depth (cm):** 159-161
Age: 25,910 ± 350 **Corr. Age:** 25,460 ± 350 **Material:** Benthic Foraminifera
Weight (mg): 10.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.264
Sample Notes: 1 *Pyrgo sp.*; 2 *Rupertina sp.*; 1 *Elphidiella sp.*; 14 *Planulina ariminensis*; 4 *Cibicides lobatulus*; 10 *Melonis zaandamae;* 16 *Miliolids*; 4 *Pullenia bulloides*

Lab. ID: AA - 29194 **GRL**-1391-S **Depth (cm):** 191-193
Age: 26,400 ± 360 **Corr. Age:** 25,950 ± 360 **Material:** Mollusc
Weight (mg): 16.5 **Genus:** *Dentalium* **Species:**

δ^{13}**C:** Measured δ^{13}**C (‰):** 2.056
Sample Notes: 1 *Dentalium*

Lab. ID: AAR - 3518 **GRL**-1292-S **Depth (cm):** >252
Age: 27,530 ± 300 **Corr. Age:** 27,080 ± 300 **Material:** Foraminifera
Weight (mg): 9.5 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.21
Sample Notes: 800 *N. pachyderma* (s.)

Core Summary: The core was taken from the Denmark Strait near the site of V28-14. The core covers about 17,000 years of record, but there is limited recovery of Holocene sediment which appears typical for this region (see other cores this report from the area). Detailed description of this core is included in the MSc thesis of Cartee-Schoolfield (in prep).

EAST GREENLAND FJORDS AND SHELF

Kangerlussuaq Fjord

Core: HU93030-028

Location: outer Kangerlussuaq Fjord, near BS1191-K8
Lat.: 68˚ 08.05’ **Long.:** -31˚ 52.08’ **Depth (mwd):** -874

Lab. ID: AA - 18399 **GRL**-1200-S **Depth (cm):** 26-28
Age: 16,450 ± 135 **Corr. Age:** 15,900 ± 135**Material:** Planktic Foraminifera
Weight (mg): 8.0 **Genus:** *Neoglobоquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.10
Contributor: Syvitski/Andrews
Sample Notes: 1000 *Neoglobоquadrina pachyderma* (s.)
Stratigraphy: Sample taken from sandy layer.

Core Summary: (LMS): The sand layer is interpreted to be a turbidite deposit based on the basal erosional contact, the magnetic susceptibility log, and it being a sandy unit. The radiocarbon age is stratigraphically incorrect as it contains older, reworked fauna.
References: Syvitski et al., 1996; Smith, 1997

Miki Fjord

Core: JM96-1212/1-GC

Location: Miki Fjord, inner region, behind the bend in the fjord
Lat.: 68˚ 09’ **Long.:** -31˚ 21.6’ **Depth (mwd):** -30

Lab. ID: AA - 27762 **GRL**-1354-S **Depth (cm):** 20
Age: 5 ± 40 **Corr. Age:** **Material:** Mollusc
Weight (mg): 19.1 **Genus:** *Portlandia* **Species:** *arctica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.756
Contributor: L.M. Smith
Stratigraphy: Sample extracted from fine-grained mud with pebbles.

Significance: First mollusc recovered from Miki Fjord for radiocarbon dating.
Core Summary: (LMS): There have been problems with recovering sufficient carbonate material for dating in Miki Fjord, and organic dates are not reliable as there is "old" carbon contamination (Manley and Jennings, 1996 and Kaufman and Williams, 1992). This is the first radiocarbon date on carbonate material from within Miki Fjord, as the other cores were from outer Miki Fjord (BS11-91-K11). This date supports that there is Holocene accumulation occurring within the fjord basin, although at lower rates than observed in the larger fjords, Kangerlussuaq and Nansen fjords.

Nansen Fjord

Core: JM96-1210/1-GC

Location: Nansen Fjord, old BS1191-K14 site
Lat.: 68˚ 11.00' **Long.:** -29˚ 36.00' **Depth (mwd):** -452

Lab. ID: AA - 26518 **GRL**-1336-S **Depth (cm):** 134-138
Age: 2,150 ± 40 **Corr. Age:** 1,500 ± 40 **Material:** Benthic Foraminifera
Weight (mg): 1 **Genus:** *Cassidulina* **Species:** *teretis*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.75
Contributor: J.T. Andrews
Sample Notes: 352 *Cassidulina teretis*

Lab. ID: AA - 23219 **GRL**-1287-S **Depth (cm):** 332
Age: 3,050 ± 80 **Corr. Age:** 2,500 ± 80 **Material:** Benthic Foraminifera
Weight (mg): 3.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.3
Contributor:
Sample Notes: Mixed benthics: 227 *E.excavatum fm. clavata,* 144 *Cassidulina teretis,* 105 *Melonis zaandamae,* 512 *Cassidulina reniforme,* 35 *Pullenia bulloides,* 39 *Buccella frigida,* 28 *Islandiella norcrossi,* 22 *Cibicides lobatulus,* 2 each *Fissurina sp., Quinqueloculina sp., Nonion sp.*
Stratigraphy: basal date on the core catcher

Core Summary: This core extends the record from Nansen Fjord back to nearly 3,000 years BP. The core site is close to that studied by Jennings and Weiner (1996). Results from this core were presented as a poster at the Annual GSA Meeting (Eastman and Andrews, 1997).

Kangerlussuaq Trough

Core: BS1191-K3

Location: Kangerlussuaq Trough, inner continental shelf, landward of inner sill
Lat.: 68˚ 00.00’ **Long.:** -31˚ 46.26’ **Depth (mwd):** -550

Lab. ID: AA - 19912 **GRL**-1217-S **Depth (cm):** 15-17
Age: 8,545 ± 170 **Corr. Age:** 7,995 ± 170 **Material:** bivalve
Weight (mg): 3.0 **Genus:** *Yoldiella* **Species:** *sp*.
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.T. Andrews
Sample Notes: bivalve fragment
Stratigraphy: Sample taken from base of core that recovered only massive diamicton.
Core Summary: (LMS): Stiff, pebbly mud, interpreted as massive diamicton, was recovered in this short (17cm) core from the inner continental shelf in Kangerlussuaq Trough. It is difficult to reconcile whether this core recovered glacial till or glacial marine diamicton, although the radiocarbon age indicates that it's glacial marine diamicton.
Reference: Preston, 1996

Core: BS1191-K5

Location: Kangerlussuaq Trough, middle continental shelf in Kangerlussuaq Trough
Lat.: 67˚ 24.59’ **Long.:** -31˚ 03.98’ **Depth (mwd):** -622

Lab. ID: AA - 19913 **GRL**-1218-S **Depth (cm):** 100
Age: 7,240 ± 140 **Corr. Age:** 6,690 ± 140 **Material:** Planktic foraminifera
Weight (mg): 2.5 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.T. Andrews
Sample Notes: 364 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Sample taken from weakly stratified, fine-grained mud with pebbles.

Core Summary: (LMS): This date list presents an additional date from this core on the middle of the Kangerlussuaq Trough, East Greenland shelf. A basal date from the core cutter at ≥250 cm of 8825 ± 70 (reservoir corrected) (AA-8333) from this core was reported in the previous date list (Kaufman and Williams, 1992). Two additional dates (AA-9065 and AA-9066, reported in Manley and Jennings, 1996) indicate that the sediment accumulation rates over the last 5000 years has been around 14 cm/ka. The addition of this date indicates that sediment accumulation rates are highest in the early Holocene until approximately 5000 yrs ago when they decrease dramatically.
References: Preston, 1996; Andrews et al., 1997; Smith, 1997

Core: HU93030-013 TWC

Location: Kangerlussuaq Trough, mouth of Kangerlussuaq Trough
Lat.: 65˚ 26.35' **Long.:** -30˚ 28.8' **Depth (mwd):** -430

Lab. ID: AA - 19916 **GRL**-1221-S **Depth (cm):** 8
Age: >39,000 **Corr. Age:** **Material:** Planktic Foraminifera
Weight (mg): 5.3 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.36
Contributor: Stein/Andrews
Sample Notes: 700 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date on planktonic foraminifers within tan sandy silty mud with scattered coral or bryozoan-like fragments.

Lab. ID: AA - 18794 **GRL**-1202-S **Depth (cm):** 15-16
Age: 1,465 ± 65 **Corr. Age:** 915 ± 65 **Material:** Other
Weight (mg): 32.1 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.04
Contributor: Stein/Andrews
Sample Notes: 1 large barnacle of undetermined genus and species - encrusting a large volcanic dropstone.
Stratigraphy: Date obtained from sample at base of core within sandy silty mud with dropstones.

Core Summary: (AEJ) This is a 16 cm long core from the mouth of Kangerlussuaq Trough. The two dates from this short core are inverted. The lower date at 15-16 cm, AA-19916, is of late Holocene age, indicating that the overlying infinite date on planktic foraminifers is reworked.
Reference: Asprey et al., 1993

Core: JM96-1213/1-GC

Location: Kangerlussuaq Trough, inner continental shelf, seaward of inner sill
Latitude: 67˚ 17.30' **Longitude:** -30˚ 57.60' **Depth (mwd):** -557

Lab. ID: AA - 29199 **GRL**-1396-S **Depth (cm):** 68
Age: 10,520 ± 110 **Corr. Age:** 9970 ± 110 **Material:** Mollusc
Weight (mg): 8.2 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 2.488
Contributor: A.E. Jennings
Sample Notes: broken pelecypod
Stratigraphy: Date from upper IRD poor sediments.

Lab. ID: AA - 29200 **GRL**-1397-S **Depth (cm):** 199
Age: 14,680 ± 170 **Corr. Age:** 14,130 ± 170 **Material:** Benthic Foraminifera
Weight (mg): 2.8 **Genus:** *Triloculina* **Species:** *sp.*
δ^{13}**C:** Measured δ^{13}**C (‰):** -4.197
Contributor: A.E. Jennings
Sample Notes: single *Triloculina sp.*
Stratigraphy: Date on single, large foraminifer submitted in an effort to improve the dating resolution in the core.

Lab. ID: AA - 29201 **GRL**-1398-S **Depth (cm):** 319-321
Age: 12,630 ± 80 **Corr. Age:** 12,080 ± 80 **Material:** Bryozoa
Weight (mg): 9.5 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.825
Contributor: A.E. Jennings
Sample Notes: unidentified Bryozoans
Stratigraphy: Abundant, well preserved bryozoans submitted to improve dating resolution in the core. Date submitted immediately above contact between IRD-rich mud glacial-marine mud and overlying bioturbated mud, which may approximate the contact between seismic stratigraphic units K (proximal glacial marine) and L (marine).

Lab. ID: AA - 29202 **GRL**-1399-S **Depth (cm):** 389-391
Age: 13,690 ± 230 **Corr. Age:** 13,140 ± 230 **Material:** Benthic Foraminifera
Weight (mg): 3.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.252
Contributor: A.E. Jennings
Sample Notes: Mixed benthics: 7 *Nonionellina labradorica*, 54 *Melonis zaandamae*, 152 *Islandiella norcrossi*, 20 *I. helenae*, 8 *Cibicides lobatulus*
Stratigraphy: Date from within seismic stratigraphic unit K, interpreted as proximal glacial marine sediments.

Lab. ID: AA - 29203 **GRL**-1400-S **Depth (cm):** 439-441
Age: 13,356 ± 108 **Corr. Age:** 12,806 ± 108 **Material:** Benthic Foraminifera
Weight (mg): 3.5 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.332
Contributor: A.E. Jennings
Sample Notes: 98 *Nonionellina labradorica*
Stratigraphy: Date from near the base of seismic stratigraphic unit K, interpreted as proximal glacial marine sediments (Stein, 1996).

Lab. ID: AA - 29204 **GRL**-1401-S **Depth (cm):** 473-475
Age: 13,830 ± 270 **Corr. Age:** 13,280 ± 270 **Material:** Benthic Foraminifera
Weight (mg): 3.2 **Genus:** *Elphidium* **Species:** *excavatum* forma *clavata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.698
Contributor: A.E. Jennings
Sample Notes: 295 *Elphidium excavatum* forma *clavata*

Stratigraphy: Deepest possible level in the core that could be dated. The fauna dated was dominated by well-preserved *Elphidium excavatum* forma *clavata*. This species is considered an indicator of glacial ice proximity. The dated level appears to represent the base of acoustically stratified sediments of seismic stratigraphic unit K (proximal glacial marine sediments) and should provide a close constraint on the timing of deglaciation of the site.

Core Summary: (AEJ): The six dates on this 5.4 m long core provide good constraints on the timing of deglaciation of the Kangerlussuaq Trough in the region seaward of the inner shelf sill. The lowest unit in the core, massive diamicton is interpreted to represent subglacial or ice-marginal sedimentation (Jennings et al., 1998; Smith et al., 1998). The lowest date in the core is on very well preserved *Elphidium excavatum* forma *clavata*. This species strongly dominated the assemblage and, in addition, this level in the core was the first level with abundant fauna. Together, these observations support the interpretation that the date of ca. 13.3 ka (AA-29204) closely constrains the timing of deglaciation at this site. The Holocene boundary is not captured by the dates, but the date of ca. 9.1 ka at 68 cm (AA-29199) suggests that there is very little Holocene sediment at the site. The date at 199 cm (AA-29200) is stratigraphically inverted, indicating reworking of the single large foraminifer that was dated.

Core: JM96-1214/2-GC

Location: Kangerlugssuaq Trough, inner continental shelf, shelfward of inner sill
Lat.: 67˚ 18.00’ **Long.:** -30˚ 58.00’ **Depth (mwd):** -574

Lab. ID: AA - 24836 **GRL**-1313-S **Depth (cm):** 0-2
Age: 1,105 ± 65 **Corr. Age:** 555 ± 65 **Material:** Benthic Foraminifera
Weight (mg): 4.1 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.665
Contributor: A.E. Jennings
Sample Notes: Mixed benthics: 104 *Elphidium excavatum* , 119 *Elphidium excavatum* forma *clavata*, 34 *Buccella frigida*, 25 *Cassidulina teretis*, 23 *Melonis zaandamae*, 10 *Pullenia bulloides*, 8 *Nonionellina labradorica*, 8 *Cibicides lobatulus*, *7 Buccella tenerrima*, 7 *Astrononion gallowayi*, 3 *Triloculina sp.*, 2 *Cassidulina reniforme*, 1 *Dentalina sp.*
Stratigraphy: Date taken on material at top of core to check that there is modern sedimentation, and that little surface sediment was lost during coring.

Lab. ID: AA - 31251 **GRL**-1447-S **Depth (cm):** 48-50
Age: 7,265 ± 70 **Corr. Age:** 6,715 ± 70 **Material:** Benthic Foraminifera
Weight (mg): 4.1 **Genus:** *Globobulimna* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.640
Contributor: L.M. Smith
Sample Notes: 53 *Globobulimina auriculata*

Stratigraphy: This sample was recovered from fine-grained mud with pebbles at an increase in both carbonate and ice-rafted debris.

Lab. ID: AA - 31252 **GRL**-1448-S **Depth (cm):** 118-120
Age: 9,290 ± 80 **Corr. Age:** 8,740 ± 80 **Material:** Benthic Foraminifera
Weight (mg): 6.6 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.375
Contributor: L.M. Smith
Sample Notes: 88 *Globobulimina auriculata*
Stratigraphy: This sample was recovered from fine-grained mud with pebbles.

Lab. ID: AA - 31261 **GRL**-1459-S **Depth (cm):** 178-180
Age: 11,210 ± 330 **Corr. Age:** 10,660 ± 330 **Material:** Benthic Foraminifera
Weight (mg): 2.2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.780
Contributor: L.M. Smith
Sample Notes: 154 *Nonionellina labradorica*
Stratigraphy: This sample was recovered from fine-grained mud with pebbles.

Lab. ID: AA - 31262 **GRL**-1460-S **Depth (cm):** 354-356
Age: 16,210 ± 170 **Corr. Age:** 15,660 ± 170 **Material:** Benthic Foraminifera
Weight (mg): 3.6 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -5.738
Contributor: L.M. Smith
Sample Notes: Mixed benthics: 45 *Triloculina trihedra*, 106 *Quinqueloculina seminulum*
Stratigraphy: This sample was recovered from fine-grained mud with pebbles.

Lab. ID: NSRL - 10786 **GRL**-1519-S **Depth (cm):** 468-470
Age: 12,700 ± 110 **Corr. Age:** 12,150 ± 110 **Material:** Bryozoa
Weight (mg): 5.6 **Genus:** **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Contributor: L.M. Smith
Sample Notes: unknown Bryozoa
Stratigraphy: This sample was taken from a massive, diamicton.

Lab. ID: AA - 29205 **GRL**-1402-S **Depth (cm):** 560-564
Age: 11,380 ± 80 **Corr. Age:** 10,830 ± 80 **Material:** Benthic Foraminifera
Weight (mg): 3.2 **Genus:** *Nonionella* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -4.524
Contributor: A.E. Jennings
Sample Notes: 144 *Nonionella labradorica*
Stratigraphy: This sample was recovered from near the base of the core.

Significance: This core was opened and sampled by LMS as part of her PhD dissertation at the University of Colorado.

Core Summary: (LMS): JM96-1214/2-GC recovered a high-resolution Holocene record, with the high accumulation rates in the early Holocene (Younger Dryas to PreBoreal). The basal date of 10,830±80 ^{14}C yrs (corrected) occurs at a peak in Vedde Ash (10.3 ^{14}C yrs), and may need to be corrected to the age of the Vedde Ash. The two oldest dates in the lower 3 and 4 m are thought to be reworked. The dates of 10,660±330 is also thought to be a bit too old, and the age model for the lower 4 m of the core will be based on the tephra peaks, instead of the radiocarbon dates. It appears that the high amount of sediment coming in during the Younger Dryas to PreBoreal time caused reworked dates. The upper three radiocarbon dates are thought to be stratigraphically correct, as the 6715±70 ^{14}C yrs date on the increase in carbonate material and ice-rafted debris is similar to other records in the Kangerlussuaq Trough (Andrews et al., 1997).

Core: JM96-1215/2-GC

Location: Kangerlugssuaq Trough, middle continental shelf
Lat.: 67˚ 02.80' **Long.:** -30˚ 51.60' **Depth (mwd):** -668

Lab. ID: AA - 24837 **GRL**-1314-S **Depth (cm):** 5-7
Age: 2,630 ± 75 **Corr. Age:** 2,080 ± 75 **Material:** Benthic Foraminifera
Weight (mg): 6.0 **Genus:** *Elphidium* **Species:** sp.
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.714
Contributor: A.E. Jennings
Sample Notes: unknown number sent
Stratigraphy: Date from sample near core top, within seismic stratigraphic unit L, postglacial marine sediments.

Lab. ID: AA - 31747 **GRL**-1450-S **Depth (cm):** 44-46
Age: 6180 ± 170 **Corr. Age:** 5630 ± 170 **Material:** Planktic Foraminifera
Weight (mg): 2.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.56
Contributor: A.E. Jennings
Sample Notes: 704 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Sample taken near the core top within postglacial seismic stratigraphic unit L.

Lab. ID: AA - 31254 **GRL**-1451-S **Depth (cm):** 148-150
Age: 9,005 ± 70 **Corr. Age:** 8,455 ± 70 **Material:** Benthic Foraminifera
Weight (mg): 6.0 **Genus:** *Globobulimina* **Species:** *auriculata arctica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.269
Contributor: A.E. Jennings
Sample Notes: 93 *Globobulimina auriculata arctica*
Stratigraphy: Sample from upper part of the core, within postglacial marine unit L, submitted to improve dating resolution.

Lab. ID: AA - 31255 **GRL**-1452-S **Depth (cm):** 248-250
Age: 9,890 ± 65 **Corr. Age:** 9,340 ± 65**Material:** Benthic Foraminifera
Weight (mg): 8.6 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.035
Contributor: A.E. Jennings
Sample Notes: 317 *Nonionellina labradorica*
Stratigraphy: Sample from upper part of core within postglacial seismic stratigraphic unit L.

Lab. ID: AA - 31256 **GRL**-1453-S **Depth (cm):** 308-310
Age: 10,720 ± 70 **Corr. Age:** 10,170 ± 70**Material:** Benthic Foraminifera
Weight (mg): 4.4 **Genus:** *Globobulinima* **Species:** *auriculata arctica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.242
Contributor: A.E. Jennings
Sample Notes: 66 *Globulimina auriculata arctica*
Stratigraphy: Sample taken within postglacial marine seismic stratigraphic unit L.

Lab. ID: AA - 32954 **GRL**-1457-S **Depth (cm):** 354-356
Age: 10,480 ± 85 **Corr. Age:** 9,930 ± 85 **Material:** Mollusc
Weight (mg): 6.1 **Genus:** *Chlamys* **Species:** *groenlandica*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.6
Contributor: A.E. Jennings
Sample Notes: *Chlamys groenlandica*
Stratigraphy: Sample taken within postglacial marine seismic stratigraphic unit L.

Lab. ID: AA - 31257 **GRL**-1454-S **Depth (cm):** 402-404
Age: 10,480 ± 260 **Corr. Age:** 9930 ± 260**Material:** Mixed Foraminifera
Weight (mg): 3.7 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.177
Contributor: A.E. Jennings
Sample Notes: 417 *Cassidulina teretis* and 461 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Sample taken within postglacial marine seismic stratigraphic unit L.

Lab. ID: AA - 31258 **GRL**-1455-S **Depth (cm):** 458-460
Age: 11,870 ± 110 **Corr. Age:** 11,320 ± 110**Material:** Planktic Foraminifera
Weight (mg): 4.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.076
Contributor: A.E. Jennings
Sample Notes: 757 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Sample taken within postglacial marine seismic stratigraphic unit L.

Lab. ID: AA - 31259 **GRL**-1456-S **Depth (cm):** 494-496
Age: 12,260 ± 100 **Corr. Age:** 11,710 ± 100**Material:** Mixed Foraminifera
Weight (mg): 4.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.517

Contributor: A.E. Jennings
Sample Notes: 614 *Neogloboquadrina pachyderma* (s.), 202 *Cassidulina teretis*, 34 *Pullenia bulloides*, 60 *Melonis zaandamae*
Stratigraphy: Sample taken near the base of postglacial marine seismic stratigraphic unit L.

Lab. ID: CAMS - 32045 **GRL**-1278-S **Depth (cm):** >587
Age: 12,900 ± 50 **Corr. Age:** 12,350 ± 50 **Material:** Mixed Foraminifera
Weight (mg): 4.9 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A.E. Jennings
Sample Notes: 254 *Melonis zaandamae*, 214 *Islandiella norcrossi*, 320 *Neogloboquadrina pachyderma* (s.), 6 other species
Stratigraphy: basal date from core catcher within the uppermost sediments of seismic unit K, interpreted as proximal glacial marine sediments by Stein (1996).

Core Summary: (AEJ): This 5.87 m long core was collected from the seaward end of the deep basin within Kangerlussuaq Trough, where the sediment section thinned sufficiently to allow collection of all of seismic stratigraphic unit L and the uppermost part of unit K, as defined by Stein (1996). The basal date indicates that the top of unit K is ca. 12.4 kyr, which is consistent with the faunal and isotopic changes that suggest the end of glacial marine conditions in PO175/1-5-1 (AA-19918). The three radiocarbon dates between 3.08 m and 4.04 m overlap at two sigma. These dates are surprisingly young compared with the first occurrence of Vedde tephra (10.3 ka) at ca. 3.8 m. The core contains at least 2.3 m of Holocene sediments. A PhD thesis by Hagen (1999) includes some data from this core and companion core JM96-1215/1GC.

Core: JM96-1216/1-GC

Location: Kangerlussuaq Trough, outer continental shelf
Lat.: 65˚ 57.77’ **Long.:** -30˚ 38.00’ **Depth (mwd):** -478

Lab. ID: AA - 29212 **GRL**-1409-S **Depth (cm):** 160-162
Age: 8,635 ± 80 **Corr. Age:** 8,185 ± 80 **Material:** Planktonic Foraminifera
Weight (mg): 7.0 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.626
Contributor: S. Hagen
Sample Notes: 1040 *Neogloboquadrina pachyderma* (s). The two dates from this core have only had a 450 yr marine reservoir correction.
Stratigraphy: Sample from postglacial marine seismic unit L.

Lab. ID: AA - 29213 **GRL**-1410-S **Depth (cm):** 301-303
Age: 12,460 ± 75 **Corr. Age:** 12,010 ± 75 **Material:** Foraminifera
Weight (mg): 8.2 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)

δ^{13}**C:** Measured δ^{13}**C (‰):** 0.049
Contributor: S. Hagen
Sample Notes: 800 *Neogloboquadrina pachyderma* (s). The two dates from this core have only had a 450 yr marine reservoir correction.
Stratigraphy: This is the lowest date in the core. It lies in glacial marine sediments above the basal diamicton unit that is interpreted as till.

Core Summary: (AEJ) This 3.69 m long core penetrated through the upper marine sediments on the shelf into an underlying seismic unit J, interpreted as till (Stein, 1996). Together with dates from a companion core (JM96-1216/2-GC) taken at the same site, this core provides a constraint on the timing of deglaciation of the outer shelf. The upper diamicton unit is interpreted as glacial marine sediments. These sediments were too thin to be resolved on the seismic profiles. A PhD thesis by Hagen (1999) presents the data on this core and three additional radiocarbon dates.

Core: JM96-1216/2-GC

Location: Kangerlussuaq Trough, outer continental shelf
Lat: 65˚ 57.77' **Long:** -30˚ 38.00' **Depth (mwd):** -478

Lab. ID: AA - 24838 **GRL**-1315-S **Depth (cm):** 0-2
Age: 3,295 ± 70 **Corr. Age:** 2,845 ± 70 **Material:** Foraminifera
Weight (mg): 4.1 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.714
Contributor: A.E. Jennings
Sample Notes: 600 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Core-top date.

Lab. ID: AA - 31751 **GRL**-1476-S **Depth (cm):** 54-56
Age: 8180 ± 80 **Corr. Age:** 7730 ± 80 **Material:** Benthic Foraminifera
Weight (mg): 4.5 **Genus:** *Globobulimna* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.652
Contributor: A.E. Jennings
Sample Notes: 61 *Globobulimna auriculata*
Stratigraphy: Date from upper part of core in fine mud unit Fwp.

Lab. ID: AA - 31752 **GRL**-1477-S **Depth (cm):** 94-96
Age: 9580 ± 100 **Corr. Age:** 9130 ± 100 **Material:** Foraminifera
Weight (mg): 5.2 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A. E. Jennings
Sample Notes: 64 *Globobulimna auriculata*
Stratigraphy: Date from within upper fine grained unit with wispy lamination (Fwp) ca. 15 cm below the Saksunarvatn tephra layer identified from microprobe analyses.

Lab. ID: AA - 31753 **GRL**-1478-S **Depth (cm):** 164-166
Age: 10,940 ± 130 **Corr. Age:** 10,490 ± 130 **Material:** Foraminifera
Weight (mg): 5.2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0
Contributor: A. E. Jennings
Sample Notes: 154 *Nonionellina labradorica*
Stratigraphy: Sample from upper fine mud unit with rare pebbles.

Lab. ID: AA - 23220 **GRL**-1288-S **Depth (cm):** 210-212
Age: 10,625 ± 90 **Corr. Age:** 10,175 ± 90 **Material:** Mollusc
Weight (mg): 24.8 **Genus:** *Astarte* **Species:** *undata*
δ^{13}**C:** Measured δ^{13}**C (‰):** +1.8
Contributor: A.E. Jennings
Sample Notes: only 1 valve sent
Stratigraphy: Sample from near the bottom of lithofacies Fwp, fine mud with wispy lamination and rare pebbles. Immediately below this level is an IRD rich diamicton unit. This date is slightly above a level tentatively identified from microprobe data as the layer containing the first peak of Vedde tephra.

Lab. ID: CAMS - 32046 **GRL**-1279-S **Depth (cm):** 246
Age: 12,040 ± 80 **Corr. Age:** 11,590 ± 80 **Material:** Bivalve
Weight (mg): 12.5 **Genus:** *Astarte* **Species:** cf. *undata*
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A.E. Jennings
Sample Notes: sent both valves of the articulated bivalve
Stratigraphy: basal date on mollusc in core catcher. See comments under AA-23221.

Lab. ID: AA - 23221 **GRL**-1289-S **Depth (cm):** >246
Age: 14,550 ± 150 **Corr. Age:** 14,100 ± 150 **Material:** Benthic Foraminifera
Weight (mg): 8.0 **Genus:** *Triloculina* **Species:** *sp.*
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.49
Contributor: A.E. Jennings
Sample Notes: single *Triloculina sp.*
Stratigraphy: Basal date on a single large foraminifer in core catcher.

Core Summary: (AEJ): All dates in this core and its companion core JM96-1216/1-GC were corrected by only 450 years for the marine reservoir effect as opposed to a 550 year correction applied to the other East Greenland shelf cores. This core contains at least part of the deglaciation and the Holocene. The core top date indicates reasonable recovery of the sediment surface. The core catcher stopped in stiff mud that is probably till. However, the companion core, JM96-1216/1-GC, appears to preserve a more complete stratigraphy and to provide a better minimum age on the timing of glacial marine sedimentation. There were two widely separated dates obtained on the core catcher of JM96-1216/2-GC (AA-23221 and CAMS-32046). The date of 11.6 on the shell is probably too young, and the date on the single foraminifer of 14.1 ka is consistent with the predicted timing of deglaciation from PO175/1-5-1, but must not be in situ. Research

on this core is close to completion with information on tephrostratigraphy, stable isotopes etc. in preparation. Jennings et al., 1998 and Smith et al., 1998 present abstracts of preliminary work on the core.

Core: PO175/1-5-1

Location: Kangerlussuaq Trough, middle continental shelf
Lat.: 66˚ 46.00’ **Long.:** -30˚ 50.00’ **Depth (mwd):** -501

Lab. ID: AA - 19918 **GRL**-1223-S **Depth (cm):** 125
Age: 13,024 ± 120 **Corr. Age:** 12,474 ± 120 **Material:** bivalve
Weight (mg): 29.5 **Genus:** *Nuculana* **Species:** *pernula*
δ^{13}**C:** Measured δ^{13}**C (‰):** +0.7
Contributor: J.T. Andrews
Stratigraphy: This core was collected within seismic stratigraphic unit L, postglacial marine unit, defined by Stein (1996).

Core Summary: (AEJ): This date provides an upper constraint on the transition from glacial marine to marine conditions on the middle shelf in Kangerlussuaq Trough. It lies ca. 15 cm above the marked change in foraminiferal faunas from sediments dominated by glacial marine species to sediments with 50% *Cassidulina teretis*, and to the change from extremely variable δ^{18}O values on *Neogloboquadrina pachyderma* (s.) to more stable values (Jennings et al., 1998). This date is consistent with the date in JM96-1215/2-GC at the top of seismic stratigraphic unit K, ice proximal glacial marine sediments (Stein, 1996), providing supporting evidence for the timing of the transition to marine conditions on the middle shelf (Jennings et al., 1998; Smith et al., 1998). The 6 other dates on the core were reported in two previous Date Lists (Kaufman and Williams, 1992; Manley and Jennings, 1996) and other publications that include this core include Andrews et al., 1996 and Williams et al., 1995.

East Greenland Shelf

Core: BS1191-K15

Location: Nansen Trough, inner continental shelf
Lat.: 68˚ 06 02’ **Long.:** -29˚ 27’ **Depth (mwd):** 445

Lab. ID: CAMS - 23553 **GRL**-1203-S **Depth (cm):** 73-76
Age: 3930 ± 60 **Corr. Age:** 3380 ± 60 **Material:** Foraminifera
Weight (mg): 2.2 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: Andrews/Jennings
Sample Notes: Mixed planktic and benthic foraminiferal Species: 264 *Neogloboquadrina pachyderma* (s.) and 405 *Cassidulina teretis*.

Stratigraphy: Sample taken directly beneath contact between vaguely stratified mud with calcareous foraminifera and pebbly mud with agglutinated foraminifera.

Lab. ID: AA - 19914 **GRL**-1219-S **Depth (cm):** 140-142
Age: 8,400 ± 230 **Corr. Age:** 7,850 ± 230 **Material:** Benthic foraminifera
Weight (mg): 3.9 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.T. Andrews
Sample Notes: Mixed benthics: 16 *Globobulimina auriculata*, 119 *Islandiella norcrossi*, 86 *Melonis zaandamae*, 59 *Cassidulina teretis*, 40 *Cibicides lobatulus*, 2 *Nonionellina labradorica*
Stratigraphy: Sample taken from within fine-grained stratified mud with pebbles.

Core Summary: (AEJ and LMS): This 165 cm gravity core appears to contain a complete record of the last 8 ka. Calcareous foramininifera were corroded throughout and are rare in the upper pebbly mud lithofacies (0-60.5 cm). Calcareous foraminifera become more abundant in the underlying vaguely stratified mud lithofacies containing only scattered pebbles (60.5 to base). The age of the contact is approximately 3000 ^{14}C years, based on the date recovered from below the lithofacies contact.
References: Preston, 1996; Smith 1997; Andrews et al., 1997

Core: JM96-1205/2-GC

Location: Northern shelf trough on inner continental shelf, north of Nansen Fjord
Lat.: 68˚ 04.30' **Long.:** -27˚ 50.10' **Depth (mwd):** -549

Lab. ID: AA - 29209 **GRL**-1406-S **Depth (cm):** 318-320
Age: 7,630 ± 190 **Corr. Age:** 7,080 ± 190 **Material:** Benthic Foraminifera
Weight (mg): 2.0 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: L.M. Smith
Sample Notes: Mixed benthics: 150 *Cassidulina reniforme*, 55 *Cassidulina teretis*, 42 *Melonis zaandamae*, 15 *Elphidium excavatum* , 3 *Elphidium sp.*, 14 *Cibicides lobatulus*, 27 *Elphidium excavatum* forma *clavata*, 2 *Astrononion gallowayi*, 10 *Islandiella norcrossi*, 7 *Buccella frigida*, 2 *Stainforthia concava*, 1 *Fissurina sp.*, 1 *Pullenia bulloides*, 4 *Nonion grateloupi*
Stratigraphy: Sample taken from bioturbated, fine-grained mud with pebbles at an interval where there is a shift from higher to lower carbonate (bottom to top of core).

Lab. ID: AA - 27764 **GRL**-1366-S **Depth (cm):** 408-410
Age: 8,845 ± 60 **Corr. Age:** 8,295 ± 60 **Material:** Mollusc
Weight (mg): 8.7 **Genus:** **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: L.M. Smith
Sample Notes: bivalve fragments - probably 2 different species

Stratigraphy: Sample taken from bioturbated, fine-grained mud with pebbles.

Lab. ID: AA - 24835 **GRL**-1312-S **Depth (cm):** 507
Age: 9,220 ± 75 **Corr. Age:** 8,670 ± 75 **Material:** Foraminifera
Weight (mg): 8.5 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: J.T. Andrews
Sample Notes: 146 *Islandiella norcrossi*, 120 *Melonis zaandamae*, 16 *Cibicides lobatulus*, 14 *Cassidulina reniforme*, 13 *Elphidium excavatum* forma *clavata*, 9 *Nonionellina labradorica*, 3 *Stainforthia concava*, 2 *Lagena sp.*, 10 *Neogloboquadrina pachyderma* (s.), couple 100 very small unidentified benthics
Stratigraphy: Sample recovered from the core catcher, representing a basal date for the core.

Significance: The core has been opened and described by LMS as part of her PhD dissertation at the University of Colorado.
Core Summary: (LMS): This core recovered a high-resolution Holocene record from an inner continental shelf basin to the north of Kangerlussuaq Trough. Sediments in this core are recording ice-rafting conditions during the Holocene, and should also be influenced predominantly by the cold, East Greenland Current. There are no lithologic changes in the core, as it is all bioturbated, fine-grained mud with pebbles. There is little carbonate material in this core above 3m, hence the reason for dates in only the lower 2 m of the core. The chronology for the upper 3 m will rely on tephrostratigraphy and correlation to other shelf cores in the region.

Core: JM96-1207/1-GC

Location: margin of the Nansen Shelf Trough
Lat.: 68˚ 06.00’ **Long.:** -29˚ 21.00’ **Depth (mwd):** -404

Lab. ID: AA - 24839 **GRL**-1316-S **Depth (cm):** 12-14
Age: 1,575 ± 45 **Corr. Age:** 1,025 ± 45 **Material:** Mollusc
Weight (mg): 7.8 **Genus:** **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A.E. Jennings
Sample Notes: Unidentifiable bivalves
Stratigraphy: This date from near the core top suggests excellent recovery of the uppermost sediments at the site.

Lab. ID: AA - 23218 **GRL**-1286-S **Depth (cm):** 125-126
Age: 6,210 ± 55 **Corr. Age:** 5,660 ± 55 **Material:** Mollusc
Weight (mg): 48 **Genus:** *Arca* **Species:** *glacialis*
δ^{13}**C:** Measured δ^{13}**C (‰):** +1.3
Contributor: A.E. Jennings
Sample Notes: only sent 1 valve

Stratigraphy: Date on upper marine sediment unit.

Lab. ID: AA - 24840 **GRL**-1317-S **Depth (cm):** 160-162
Age: 8,250 ± 60 **Corr. Age:** 7,700 ± 60 **Material:** Mollusc
Weight (mg): 7.5 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 2.338
Contributor: A.E. Jennings
Sample Notes: unidentifiable bivalve fragments
Stratigraphy: Date on upper marine sediment unit.

Lab. ID: CAMS - 32047 **GRL**-1280-S **Depth (cm):** 324
Age: 9,800 ± 60 **Corr. Age:** 9,250 ± 60 **Material:** Mixed Foraminifera
Weight (mg): 9.4 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A.E. Jennings
Sample Notes: 318 *Elphidium excavatum* forma *clavata*, 278 *Cassidulina reniforme*, 210 *Islandiella norcrossi*, 136 *Cassidulina teretis*, 5 *Melonis zaandamae*, 12 *Nonionellina labradorica*, 24 *Cibicides lobatulus*, 6 *Astrononion gallowayi*, 4 *Buccella frigida*, 6 *Stainforthia concava*, 36 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date from base of the core in core catcher within the stiff pebbly mud lithofacies.

Core Summary: (AEJ): This 324 cm long core recovered two main lithofacies: an upper homogeneous silty clay with scattered dropstones to 265 cm underlain by stiff pebbly mud with a glacial marine foraminiferal fauna (Hansen, 1998). The dates on this core indicate that a complete sediment record from the period of ca. 9.3 to present is preserved in the core. The lithofacies change probably represents the transition from distal glacial marine conditions on the shelf to postglacial marine conditions.

ICELAND SHELF

Jökuldjúp

Core: A882-32

Location: Jökuldjúp, SW Iceland Shelf
Lat.: 64˚ 05’ **Long.:** -24˚ 19’ **Depth (mwd):** -335

Lab. ID: AA - 20192 **GRL**-1225-S **Depth (cm):** 72-78
Age: 9,745 ± 85 **Corr. Age:** 9,345 ± 85 **Material:** bivalve
Weight (mg): 17mg **Genus:** *Nuculana* **Species:** *pernula*
δ^{13}**C:** Measured δ^{13}**C (‰):** +0.5
Contributor: G. Helgadóttir

Core Summary: The dates from this core and from A882-33 (see below) were obtained in order to provide some chronology for the earlier results on changes in foramininfera and sediment properties (Helgadóttir, 1984).
Reference: for core interpretation, see Helgadóttir, 1984

Core: A882-33

Location: Jökuldjúp, SW Iceland Shelf
Lat.: 64˚ 12.08’ **Long.:** -24˚ 10.01’ **Depth (mwd):** -272

Lab. ID: AA - 20193 **GRL**-1226-S **Depth (cm):** 117-130
Age: 10,410 ± 150 **Corr. Age:** 10,010 ± 150 **Material:**
Weight (mg): 7 mg **Genus:** see comments **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** +0.1
Contributor: G. Helgadóttir
Sample Notes: *Cuspidana sp., Nuculana sp., Hyatella arctica*

Lab. ID: AA - 20194 **GRL**-1227-S **Depth (cm):** 145-155
Age: 10,990 ± 190 **Corr. Age:** 10,590 ± 190 **Material:** molluscs and forams
Weight (mg): 3 mg **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** +0.1
Contributor: G. Helgadóttir

Core Summary: Dates were obtained in order to provide some chronological control on foraminifera assemblage changes reported in Helgadóttir (1984). Core is located close to HU93030-006LCF (see this date list)(Jennings et al., in press).
Reference: Helgadóttir, 1984

Core: B997-347 PC1

Location: SW Iceland shelf, Jökuldjúp, west of HU93030-006
Lat.: 63˚ 55.7 **Long.:** -24˚ 28.9' **Depth (mwd):** -371

Lab. ID: AA - 32970 **GRL**-1498-S **Depth (cm):** 2-4
Age: 770 ± 65 **Corr. Age:** 370 ± 65 **Material:** Benthic Foraminifera
Weight (mg): 3.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0
Contributor: L.M. Smith
Sample Notes: 41 *Uvigerina peregrina,* 90 *Pullenia bulloides,* 326 *Angulogerina angulosa,* 1 *Pyrgo sp.*
Stratigraphy: Sample recovered from top of core in fine-grained stratified mud.

Lab. ID: AA - 32971 **GRL**-1499-S **Depth (cm):** 100-102
Age: 5,705 ± 65 **Corr. Age:** 5,305 ± 65 **Material:** Foraminifera
Weight (mg): 8.9 **Genus:** *Uvigerina* **Species:** *peregrina*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.1
Contributor: L.M. Smith
Sample Notes: 150 *Uvigerina peregrina*
Stratigraphy: Sample recovered from fine-grained stratified mud.

Lab. ID: AA - 32972 **GRL**-1500-S **Depth (cm):** 220-222
Age: 9,695 ± 95 **Corr. Age:** 9,295 ± 95 **Material:** Benthic Foraminifera
Weight (mg): 3.6 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.0
Contributor: L.M. Smith
Sample Notes: Three species: 99 *Melonis zaandamae,* 12 *Uvigerina peregrina,* 16 *Globobulimina auriculata*
Stratigraphy: Sample recovered from fine-grained stratified mud.

Lab. ID: AA - 32973 **GRL**-1501-S **Depth (cm):** 340-342
Age: 10,460 ± 120 **Corr. Age:** 10,060 ± 120 **Material:** Foraminifera
Weight (mg): 3.3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.0
Contributor: L.M. Smith
Sample Notes: Mixed planktic and benthic: 257 *Neogloboquadrina pachyderma* (s.), 20 *Nonionellina labradorica,* 34 *Melonis zaandamae,* 6 *Nonion turgida*
Stratigraphy: Sample recovered from weakly stratified, bioturbated, fine-grained mud.

Lab. ID: AA - 32974 **GRL**-1502-S **Depth (cm):** 424-426
Age: 10,950 ± 140 **Corr. Age:** 10,550 ± 140 **Material:** Benthic Foraminifera
Weight (mg): 2.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -4.0
Contributor: L.M. Smith

Sample Notes: 73 *Cassidulina reniforme*, 61 *Nonionellina labradorica*, 37 *Elphidium excavatum* forma *clavata*, 30 *Islandiella norcrossi*, *17 Melonis zaandamae*, 15 *Stainforthia concava*, 5 *Cibicides lobatulus*, 2 *Buccella tenerrima*, 1 *Globobulimina auriculata*, 1 *Quinqueloculina seminulum*, 1 *Fissurina sp.*
Stratigraphy: Sample taken from weakly stratified, fine-grained mud with pebbles.

Lab. ID: CAMS - 44860	**GRL**-1327-S	**Depth (cm):** 480
Age: 10,730 ± 100	**Corr. Age:** 10,330 ± 100	**Material:** Foraminifera
Weight (mg): 3.5	**Genus:** see below	**Species:**
δ^{13}**C:** Assumed	δ^{13}**C (‰):**	

Contributor: J.T. Andrews
Sample Notes: 67 *Islandiella norcrossi*, 47 *Nonionellina labradorica*, 27 *Stainforthia concava*, 23 *Neogloboquadrina pachyderma* (s.), 9 *Elphidium excavatum clavata*, 8 *Cassidulina reniforme*, 4 *Cibicides lobatulus*, 2 *Astrononion gallowayi*, 1 *Melonis zaandamae, 1 Buccella frigida*
Stratigraphy: Sample taken from the sediment in the core catcher.

Significance: The core has been sampled as part of L.M. Smith's PhD dissertation at the University of Colorado.
Core Summary: (LMS): Core B997-347 recovered a high-resolution record of Holocene sediment. Sediment accumulation is highest at the base of the core, and accumulation decreases in the mid-Holocene. AA-32974 is thought to be reworked based on the presence of a peak in Vedde Ash at the base of the core, near CAMS-44860.

Core: B997-348 PC

Location: SW Iceland, Jökuldjúp

Lat.: 64˚ 04.5’	**Long.:** -24˚ 19.3’	**Depth (mwd):** -332

Lab. ID: CAMS - 44861	**GRL**-1328-S	**Depth (cm):** 491
Age: 12,280 ± 50	**Corr. Age:** 11,880 ± 50	**Material:** Mollusc
Weight (mg): 41.6	**Genus:** *Nuculana*	**Species:** *pernula*
δ^{13}**C:** Measured	δ^{13}**C (‰):** -1.4	

Contributor: J.T. Andrews
Stratigraphy: Sample obtained from the core catcher

Core Summary: (JTA): This date is the oldest from the transect of cores obatined at the end of the B997 cruise in Jökuldjúp (see B997-347PC and -350PC this Date List). The date from this core indicates that it should contain both the Younger Dryas and Pre-Boreal cold intervals
Reference: Andrews et al., in press

Core: B997-350 PC

Location: SW Iceland, Jökuldjúp
Lat.: 64˚ 16.479’ **Long.:** -24˚ 01.389’ **Depth (mwd):** -239

Lab. ID: AA - 29211 **GRL**-1408-S **Depth (cm):** >430
Age: 10,745 ± 75 **Corr. Age:** 10,345 ± 75 **Material:** Foraminifera
Weight (mg): 7.1 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.355
Sample Notes: 167 *Nonionellina labradorica*
Reference: Andrews et al., in press

Core: HU93030-006 LCF

Location: SW Iceland Shelf, Faxaflói Bay, Jökuldjúp
Lat.: 64˚ 17.06 **Long.:** -24˚ 12.42’ **Depth (mwd):** -247

Lab. ID: AA - 27262 **GRL**-1233-S **Depth (cm):** 252
Age: 10,430 ± 60 **Corr. Age:** 10,030 ± 60 **Material:** benthic forams
Weight (mg): 9.2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: A.E. Jennings
Stratigraphy: Date within transitional unit bearing Vedde tephra.

Lab. ID: AA – 20732 **GRL**-1241-S **Depth (cm):** 278
Age: 11,730 ± 305 **Corr. Age:** 11,330 ± 305 **Material:** benthic forams
Weight (mg): 1-2 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.88
Contributor: A.E. Jennings
Sample Notes: 52 *Nonionellina labradorica*, 65 *Islandiella helenae*
δ^{18}O =1.426 ± 0.021‰
Stratigraphy: Date from upper section of glacial marine sediments.

Lab. ID: AA - 20733 **GRL**-1242-S **Depth (cm):** 470
Age: 12,130 ± 290 **Corr. Age:** 11,730 ± 290 **Material:** benthic forams
Weight (mg): 2-3 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.73
Contributor: A.E. Jennings
Sample Notes: 115 *Nonionellina labradorica*, 205 *Elphidium excavatum* fm *clavata*,
δ^{18}O = 2.293±0.022‰
Stratigraphy: Date from upper part of glacial marine sediments.

Lab. ID: AA - 19915 **GRL**-1220-S **Depth (cm):** 622
Age: 11,830 ± 125 **Corr. Age:** 11,430 ± 125 **Material:** ossicles from ophioroids; spines and plates from echinoids

Weight (mg): 58.1 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.2
Contributor: A.E. Jennings
Stratigraphy: Date from ophiuroid ossicles near a date on foraminifers at 625 cm. This date created a stratigraphic reversal.

Lab. ID: AA - 20734 **GRL**-1243-S **Depth (cm):** 955
Age: 12,410 ± 165 **Corr. Age:** 12,010 ± 165 **Material:** ossioles from ophioroid
Weight (mg): 6.2 **Genus:** unknown **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.59
Contributor: A.E. Jennings
Stratigraphy: Date from glacial marine section.
Core Summary: $\delta^{18}O = 2.271 \pm 0.012‰$

Lab. ID: AA - 20735 **GRL**-1244-S **Depth (cm):** 1175
Age: 12,690 ± 195 **Corr. Age:** 12,290 ± 195 **Material:** benthic forams
Weight (mg): 1-2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.74
Contributor: A.E. Jennings
Sample Notes: 135 forams, $\delta^{18}O = 3.265 \pm 0.012‰$
Stratigraphy: Date from near the base of the glacial marine section.

Lab. ID: AA - 20736 **GRL**-1245-S **Depth (cm):** 1235
Age: 12,810 ± 205 **Corr. Age:** 12,410 ± 205 **Material:** Foraminifera
Weight (mg): 4 **Genus:** *Elphidium* **Species:** *excavatum* fm *clavata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.36
Contributor: A.E. Jennings
Sample Notes: 345 *Elphidium excavatum* forma *clavata*
Stratigraphy: Date from lower part of glacial marine section.

Core Summary: (AEJ): This 13.16 m LCF core was collected from the Iceland Shelf in 1993 during a CSS Hudson cruise led by James P.M. Syvitski and John T. Andrews (see Asprey et al. 1994, compilers). Five dates, including the basal date on this core (AA-12896, 12.7 ka, 13.17 m) were previously published in Manley and Jennings (1996). The six new dates published in this date list were obtained to improve the dating of the glacial marine sediments and the timing of the transitional unit. These dates are presented in Jennings et al. (in press). This core provides a high resolution record of deglaciation of the SW Iceland shelf. Five of the new dates are from the glacial marine sediments; two of these create stratigraphic reversals (AA-19915 the date on the ophiuroid ossicles and AA20733). There are two new dates from within the transitional unit that bears Vedde tephra and which separates the glacial marine from the postglacial marine sediments. The lower of these two dates is clearly reworked (AA-20732), whereas the upper one was younger than the Vedde tephra age of 10.3 kyr. The interpretation of the sediment and faunal records from this core is presented in Jennings et al. (in press) and Syvitski et al. (1999).

Kolluáll

Core: B997-343GGC

Location: W Iceland, Kolluáll
Lat.: 64˚ 46.559’ **Long.:** -24˚ 29.14’ **Depth (mwd):** -268

Lab. ID: AA - 27761 **GRL**-1353-S **Depth (cm):** 154
Age: 3,985 ± 50 **Corr. Age:** 3,585 ± 50 **Material:** Foraminifera
Weight (mg): 9.7 **Genus:** *Melonis* **Species:** *zaandamae*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.831
Contributor: J.T.Andrews
Sample Notes: 400 *Melonis zaandamae*
Stratigraphy: From the core catcher

Core Summary: (JTA/GH): Longer piston cores could not be taken from this basin due to high seas although the 3.5 kHz records indicated significant sediment accumulation. This basal date suggests a moderately high rate of sediment accumulation (Andrews et al., in press). Significant sediment has accumulated in this basin as shown by Syvitksi et al (1998).

Latra Bank

Core: JM96-1227/2-GC

Location: W Iceland Shelf, in proximity of northernmost extent of Latra moraine
Lat.: 65˚ 47’ **Long.:** -26˚ 19.5’ **Depth (mwd):** -198

Lab. ID: AA - 31248 **GRL**-1444-S **Depth (cm):** 0-2
Age: 9,560 ± 65 **Corr. Age:** 9,160 ± 65 **Material:** Foraminifera
Weight (mg): 26.7 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.16
Comment: Excellent, clean, unbroken, white *Cibicides lobatulus*, 400 forams picked. Few planktonics in sample.

Lab. ID: CAMS - 42012 **GRL**-1323-S **Depth (cm):** 56
Age: 36,050 ± 560 **Corr. Age:** 35,650 ± 560 **Material:** Benthic Foraminifera
Weight (mg): 19.9 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.5
Sample Notes: 250 Cibicides lobatulus

Core Summary: (JTA) This short core was taken close to the northern limit of the Latra End Moraine (see Syvitski et al., 1999). The sediment was extremely compact. It is

unclear whether this date provides a limiting date on the advance to this end moraine (see Andrews et al., in press).

Djúpáll

Core: A9-92-455

Location: NW Iceland Shelf, Djúpáll
Lat.: 66˚ 32.88’ **Long.:** -23˚ 47.45’ **Depth (mwd):** -182

Lab. ID: AA - 21753 **GRL**-1277-S **Depth (cm):** 63.5-65.5
Age: 2,820 ± 45 **Corr. Age:** 2,420 ± 45 **Material:** Benthic Foraminifera
Weight (mg): 6 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 2.0
Contributor: A.E. Jennings
Stratigraphy: Sample taken from within sandy unit.

Core Summary: See comment AA-19917, Manley and Jennings, 1996.
date provides a limiting date on the advance to this end moraine (see Andrews et al., in press).

Core: A9-92-456

Location: NW Iceland Shelf, Djúpáll
Lat.: 66˚ 25.04’ **Long.:** -23˚ 37.06’ **Depth (mwd):** -183

Lab. ID: CAMS - 29871 **GRL**-1276-S **Depth (cm):** 20.5-21.5
Age: 5,660 ± 60 **Corr. Age:** 5,260 ± 60 **Material:** Benthic Foraminifera
Weight (mg): 6 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Contributor: L.M. Smith
Stratigraphy: Sample taken from base of sandy unit.

Lab. ID: AAR - 3706 **GRL**-1301-S **Depth (cm):** 34.5
Age: 10,570 ± 110 **Corr. Age:** 10,170 ± 110 **Material:** Benthic Foraminifera
Weight (mg): 6.0 **Genus:** *Nonionellina* **Species:** *labradocica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.17
Contributor: L.M. Smith

Lab. ID: AAR - 3707 **GRL**-1302-S **Depth (cm):** 148-151.5
Age: 12,250 ± 120 **Corr. Age:** 11,850 ± 120 **Material:** Benthic Foraminifera
Weight (mg): 4.0 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0
Contributor: L.M. Smith

Sample Notes: *Cassidulina reniforme, Elphidium excavatum* fm *clavata, Astrononion gallowayi, Buccella frigida calida*
Stratigraphy: Sample taken from fine-grained mud.
Significance: Date is suspect, as the sample contains Vedde Ash (10.3 ^{14}C yrs)

Lab. ID: AA - 19917 **GRL**-1222-S **Depth (cm):** 153-155
Age: 10,240 ± 90 **Corr. Age:** 9,840 ± 90 **Material:** bivalve
Weight (mg): 27.5 **Genus:** *Yoldiella?* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.4
Contributor: A.E. Jennings
Stratigraphy: Sample taken from near the base of core.

Core Summary: (LMS): A9-92-456 contains two lithofacies, an underlying unit of fine-grained mud (23-162 cm) and an overlying unit of foram-rich sand (0-23 cm). Previous dates from this core (AA-14682, -14683) are reported in Manley and Jennings, 1996. The dates on the lower unit of fine-grained mud indicate that this unit was rapidly deposited during the early Holocene, with some reworking occurring. There is Vedde Ash (10.3 ^{14}C yrs) present throughout this fine-grained mud, but it is not thought to be a primary deposit of the ash. The date at the base of the sand unit (CAMS-29871) indicates that there may have been a hiatus in sediment deposition between the mud and the overlying sand. The sand deposition is assumed to be continuous through recent time based on dates on the sand unit in nearby cores A9-92-455 (see AA-21753, this datelist; AA-14681, Manley and Jennings, 1996) and A9-92-457 (Manley and Jennings, 1996).
Reference: Smith et al., 1997

Core: B997-314 SGC

Location: NW Iceland, Djúpáll
Lat.: 66˚ 41.1’ **Long.:** -24˚ 10.8’ **Depth (mwd):** -243

Lab. ID: CAMS - 46528 **GRL**-1380-S **Depth (cm):** 16.5-19.5
Age: 2,980 ± 50 **Corr. Age:** 2,580 ± 50 **Material:** Foraminifera
Weight (mg): 7.6 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Contributor:
Sample Notes: 350 grey looking specimens, contrast with CAMS-46529

Lab. ID: CAMS - 46529 **GRL**-1381-S **Depth (cm):** 16.5-19.5
Age: 1,200 ± 50 **Corr. Age:** 800 ± 50 **Material:** Foraminifera
Weight (mg): 7.5 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.2
Contributor:
Sample Notes: 250 white looking specimens, contrast with CAMS-46528

Core Summary: (JTA): This short gravity core was taken to retain the surface/water

interface and to examine high-resolution down core changes. The difference in age between these two samples, submitted on the basis of the difference in the physical appearance of the tests, indicates reworking of sediments on the surrounding banks is a strong probability (see Thors, 1974).

Core: B997-314 GGC

Location: NW Iceland, Djúpáll
Lat.: 66˚ 41.1' **Long.:** -24˚ 10.8' **Depth (mwd):** 232

Lab. ID: NSRL - 10677 **GRL**-1482-S **Depth (cm):** 17-18
Age: 1,120 ± 40 **Corr. Age:** 720 ± 40 **Material:** Mollusc
Weight (mg): 37.3 **Genus:** *Astarte* **Species:** *undata*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.2
Contributor: G. Helgadóttir
Sample Notes: Whole valve

Lab. ID: NSRL - 10678 **GRL**-1483-S **Depth (cm):** 53-54
Age: 4,670 ± 40 **Corr. Age:** 4,270 ± 40 **Material:** Mollusc
Weight (mg): 37.8 **Genus:** *Nuculana* **Species:** *pernula*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.3
Contributor: G. Helgadóttir
Sample Notes: Whole valve

Lab. ID: NSRL - 10679 **GRL**-1484-S **Depth (cm):** 87-88
Age: 7,140 ± 65 **Corr. Age:** 6,740 ± 65 **Material:** Mollusc
Weight (mg): 11.2 **Genus:** *Nuculana* **Species:** *pernula*
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: G. Helgadóttir
Sample Notes: Whole valve

Stratigraphy: This core was taken to extend our knowledge of events in Djúpáll. Because the 3.5 kHz system was inoperable at the time then no specific site seismic data are available. It can be compared to existing sites such as JM96-1232 and -1234 (see this date list).
Core Summary: (GH and JTA): This is one of several cores from Djúpáll (see this date list, e.g. B997-335, -336; JM96-1232 and 1234) (Thors and Helgadóttir, 1999). At this particular site sediment accumulation rate during the mid and late Holocene is relatively slow.

Core: B997-335 PC

Location: NW Iceland, Djúpáll
Lat.: 66˚ 41.207' **Long.:** -24˚ 10.698' **Depth (mwd):** -239

Lab. ID: AA - 31263 **GRL**-1462-S **Depth (cm):** 0-2
Age: 1,800 ± 200 **Corr. Age:** 1,400 ± 200 **Material:** Foraminifera
Weight (mg): 3.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -.116
Sample Notes: Benthic foraminifera: 70 *Cibicides lobatulus, Nonionellina labradorica*, 6 *Quinqueloculina seminulum* and small unidentified bivalve
Stratigraphy: Sample taken to confirm that the core top recovered modern sediments.

Lab. ID: AA - 29195 **GRL**-1392-S **Depth (cm):** 168-171
Age: 9,490 ± 70 **Corr. Age:** 9,090 ± 70 **Material:** Mollusc
Weight (mg): 143.8 **Genus:** *Dentalium* **Species:** *sp*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.863
Sample Notes: One Scaphopod
Stratigraphy: Base of thick ash unit
Significance: This date may help confirm or reject the hypothesis that the ash layer is Vedde Ash.

Lab. ID: AA - 27760 **GRL**-1352-S **Depth (cm):** 427.5
Age: 10,350 ± 80 **Corr. Age:** 9,950 ± 80 **Material:** Foraminifera
Weight (mg): 9.2 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.163
Sample Notes: 500 *Cibicides lobatulus*

Stratigraphy: Foraminifera extracted from the core catcher and other levels in the core.
Core Summary: (JTA, LMS, SCS): The basal date is similar to other dates from gravity cores in Djúpáll (Smith et al., 1996; Manley and Jennings, 1996; Andrews et al., in press; this report) e.g. JM96-1232GGC although it is younger than several samples from JM96-1234GGC (this report). The date at 168-171 cm closely constrains the age of a basaltic ash layer in the core, probably the Saksunarvatn ash (Cartee-Schoolfield, in prep.).

Core: B997-336 PC3

Location: NW Iceland, Djúpáll
Lat.: 66˚ 41.2 **Long.:** -24˚ 09.7’ **Depth (mwd):** -242

Lab. ID: AA - 31264 **GRL**-1463-S **Depth (cm):** 0-2
Age: 1,965 ± 60 **Corr. Age:** 1,565 ± 60 **Material:** Foraminifera
Weight (mg): 3.9 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.12
Sample Notes: Benthic foraminifera: 55 *Nonionellina labradorica*, 250 *Cibicides lobatulus*
Stratigraphy: Sample taken from top of core to confirm that the core recovered modern sediments.

Lab. ID: AA - 31265 **GRL**-1464-S **Depth (cm):** 0-2
Age: 2,875 ± 95 **Corr. Age:** 2,475 ± 95 **Material:** Mollusc
Weight (mg): 6.3 **Genus:** *Axinopsis* **Species:** *orbiculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.255
Stratigraphy: Sample taken from top of core to confirm that the core recovered modern sediments.

Lab. ID: AA - 31266 **GRL**-1465-S **Depth (cm):** 142-143
Age: 9,240 ± 200 **Corr. Age:** 8,840 ± 200 **Material:** Foraminifera
Weight (mg): 3.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.67
Sample Notes: Benthic foraminifera: 129 *Cibicides lobatulus*, 36 *Quinqueloculina seminulum*, 11 *Nonionellina labradorica*, 4 *Pyrgo sp*.
Stratigraphy: Sample taken from within the sandy, ash layer.

Lab. ID: AA - 31267 **GRL**-1466-S **Depth (cm):** 378-380
Age: 10,705 ± 80 **Corr. Age:** 10,305 ± 80 **Material:** Mollusc
Weight (mg): 34 **Genus:** *Axinopsis* **Species:** *orbiculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.477
Stratigraphy: Sample taken from within a sand layer within fine-grained mud.

Lab. ID: NSRL - 10776 **GRL**-1514-S **Depth (cm):** 454
Age: 10,860 ± 160 **Corr. Age:** 10,460 ± 160 **Material:** Mollusc
Weight (mg): 40 **Genus:** *Nuculana* **Species:** *pernula*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.8
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.8
Stratigraphy: Sample taken from within a sandy layer within fine-grained muds near to the base of the core.

Lab. ID: AA - 32967 **GRL**-1495-S **Depth (cm):** 484-486
Age: 13,385 ± 90 **Corr. Age:** 12,985 ± 90 **Material:** Mollusc
Weight (mg): 6.7 **Genus:** *Nuculana* **Species:** *pernula*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.6
Stratigraphy: Sample recovered from near the base of the core.

Lab. ID: CAMS - 42013 **GRL**-1329-S **Depth (cm):** 501
Age: 13,680 ± 70 **Corr. Age:** 13,280 ± 70 **Material:** Mollusc
Weight (mg): 6.3 **Genus:** *Axinopsis* **Species:** *orbiculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -8.5
Stratigraphy: Sample extracted from the sediments retained in the core catcher

Core Summary: (JTA, LMS, SCS): This core has been opened and is being studied by LMS and SCS. The basal date indicates that this core will partly overlap the late glacial record from JM96-1234GGC which is also from Djúpáll (Andrews et al., in press; Cartee-Schoolfield, in prep). There is close agreement in the records from this core < 450 cm with the adjacent site, B997-335PC (this date list). The date at 454 cm is

associated with an ash unit, possibly not in situ, but the difference in age between this level and the one immediately below suggests an interval of erosion or non-deposition.

Core: B997-338 PC

Location: NW Iceland, Djúpáll
Lat.: 66˚ 35.3’ **Long.:** -23˚ 58.6’ **Depth (mwd):** -209

Lab. ID: AA - 34406 **GRL**-1532-S **Depth (cm):** 19-23
Age: 11,560 ± 170 **Corr. Age:** 11,160 ± 170 **Material:** Foraminifera
Weight (mg): 5.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.6
Sample Notes: Mixed benthics: 788 *Cassidulina reniforme*, 29 *Cibicides lobatulus*, 28 *Elphidium excavatum* fm *clavata*

Lab. ID: AA - 34407 **GRL**-1533-S **Depth (cm):** 98-101
Age: 19,280 ± 420 **Corr. Age:** 18,880 ± 420 **Material:** Foraminifera
Weight (mg): 4.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.1
Sample Notes: Mixed benthics + 1.5 mg small clams: 105 *Elphidium excavatum* fm *clavata*, 105 *Cassidulina reniforme*, 75 *Cibicides lobatulus*

Lab. ID: AA - 34408 **GRL**-1534-S **Depth (cm):** 318-321
Age: 31,900 ± 1,700 **Corr. Age:** 31,500 ± 1,700 **Material:** Foraminifera
Weight (mg): 5.6 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.2

Sample Notes: Mixed benthics: 191 *Cibicides lobatulus* (grey color), 65 *Cassidulina reniforme*, *67 Elphidium excavatum* fm *clavata*, 12 *Astrononion gallowayi*, 13 others in 5 spp.

Lab. ID: AA - 32968 **GRL**-1496-S **Depth (cm):** 412
Age: 34,600 ± 640 **Corr. Age:** 34,200 ± 640 **Material:** Foraminifera
Weight (mg): 7.4 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.6
Sample Notes: Mixed benthics: 293 *Cibicides lobatulus*, 80 *Elphidium excavatum* fm *clavata*, 21 *Islandiella norcrossi*, 17 *Elphidium groenlandicum*, 16 *Islandiella islandica*, 12 *Astrononion gallowayi*, 9 in 3 other spp.

Stratigraphy: This site was selected on the basis of 3.5 kHz data taken in 1996 (JM96- cruise) and the B997 cruise. The site is close to JM96-1234. The seismic data suggests that this site would recover "old" sediments as it stratigraphically lies beneath sediments recovered at sites B997-335 and 336 (Helgadóttir, 1997). The dates from this site and JM96-1234 confirm this hypothesis.
Core Summary: (JTA and GH): The dates from this core indicate that it captured events during Marine Isotope Stages 2 and 3. The location of this core is close to that of JM96-1234 (this date list) which partly overlaps this series of dates. This series of dates

indicates that the LGM in the NW Peninsula of Iceland probably did not extend significantly beyond the present coastline. This core has been processed in the NSF-Facility's Cryogenic Magnetometer (UC-Davis)--this rock and paleomagnetic record, together with that from B997-336PC (this date list) will provide a record of events over the last 34 ka in Djúpáll.

Core: JM96-1232/1-GC

Location: NW Iceland, Djúpáll
Lat.: 66˚ 37.02' **Long.:** -24˚ 00' **Depth (mwd):** -215

Lab. ID: AAR - 3708 **GRL**-1303-S **Depth (cm):** 0-2
Age: 2,805 ± 60 **Corr. Age:** 2,405 ± 60 **Material:** Benthic Foraminifera
Weight (mg): 10.7 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.91
Sample Notes: 700 forams, some partially pyritized

Lab. ID: AAR - 3709 **GRL**-1304-S **Depth (cm):** 100-102
Age: 5,590 ± 65 **Corr. Age:** 5,190 ± 65 **Material:** Benthic Foraminifera
Weight (mg): 10.7 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0
Sample Notes: 700 forams, some partially pyritized

Lab. ID: AAR - 3710 **GRL**-1305-S **Depth (cm):** 198-200
Age: 8,360 ± 80 **Corr. Age:** 7,960 ± 80 **Material:** Benthic Foraminifera
Weight (mg): 10.7 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C: Measured** δ^{13}**C** (‰): 0.64
Sample Notes: 700 forams, some partially pyritized

Lab. ID: AAR - 3515 **GRL**-1293-S **Depth (cm):** ≥ 279
Age: 9,060 ± 70 **Corr. Age:** 8,660 ± 70 **Material:** Benthic Foraminifera
Weight (mg): 10.7 **Genus:** *Cibicides* **Species:** *lobatulus*
Sample Notes: 700 forams, some partially pyritized

Core Summary: (JTA): The four dates from this core define a simple depth/age relationship. The core is notable for its very high carbonate content and a substantial fraction of material > 63 μm are foraminifera. The dominance of *Cibicides lobatulus* suggests the presence of relatively strong bottom currents.

Core: JM96-1234/1-GC

Location: NW Iceland, Djúpáll
Lat.: 66˚ 35.25' **Long.:** -23˚ 58' **Depth (mwd):** -223

Lab. ID: CAMS - 46524 **GRL**-1376-S **Depth (cm):** 0-2
Age: 2,060 ± 50 **Corr. Age:** 1,660 ± 50 **Material:** Foraminifera
Weight (mg): 6.5 **Genus:** *Cibicides* **Species:** *lobatulus*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.5
Sample Notes: 300 *Cibicides lobatulus*

Lab. ID: CAMS - 46525 **GRL**-1377-S **Depth (cm):** 54-56
Age: 13,460 ± 70 **Corr. Age:** 13,060 ± 70 **Material:** Foraminifera
Weight (mg): 4.2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Sample Notes: 160 *Nonionellina labradorica*

Lab. ID: CAMS - 46526 **GRL**-1378-S **Depth (cm):** 158-160
Age: 14,530 ± 90 **Corr. Age:** 14,130 ± 70 **Material:** Foraminifera
Weight (mg): 2.8 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Sample Notes: 1 *Quinqueloculina sp.*, 320 *Cassidulina reniforme*

Lab. ID: CAMS - 46527 **GRL**-1379-S **Depth (cm):** 258-260
Age: 15,720 ± 70 **Corr. Age:** 15,320 ± 70 **Material:** Foraminifera
Weight (mg): 6.0 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Sample Notes: 13 *Quinqueloculina sp.*, 8 *Pyrgo sp.*, 19 *Nonionellina labradorica*, 68 *Cibicides lobatulus*, 250 *Cassidulina reniforme*

Lab. ID: CAMS - 50405 **GRL**-1425-S **Depth (cm):** 348-350
Age: 14,030 ± 70 **Corr. Age:** 13,630 ± 70 **Material:** Foraminifera
Weight (mg): 6.4 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0
Sample Notes: 487 *Cassidulina reniforme*, 414 *Elphidium excavatum* fm *clavata*, 40 *Nonionellina labradorica*

Lab. ID: AAR - 3516 **GRL**-1294-S **Depth (cm):** >360
Age: 11,450 ± 130 **Corr. Age:** 11,050 ± 130 **Material:** Foraminifera
Weight (mg): 8.0 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Sample Notes: Mixed benthic foraminifera: 365 *Cibicides lobatulus*, 640 *Cassidulina reniforme*, 450 *Elphidium excavatum* fm *clavata*

Core Summary: (JTA): The radiocarbon dates in this core are puzzling! It is not obvious why the dates are not in correct stratigraphic order. It appears that the date on the core catcher is too young. Based on comparisons with cores taken in Djúpáll (such as B997-335-336 and -338, see this Date List) it certainly appears that the core does not represent a Holocene section but does represent deposition sometime between 11 and 14 ka.

Skötufjördur

Core: B997-339PC2

Location: NW Iceland, Skötufjördur
Lat.: 66˚ 01’ **Long.:** -22˚ 48’ **Depth (mwd):** -104

Lab. ID: AA - 31234 **GRL**-1430-S **Depth (cm):** 0-1.25
Age: 1,450 ± 65 **Corr. Age:** 1,050 ± 65 **Material:** Foraminifera
Weight (mg): 5.6 **Genus:** *Elphidium* **Species:** *excavatum* fm *clavata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.847
Comment: 540 forams sampled

Lab. ID: AA - 31235 **GRL**-1431-S **Depth (cm):** 131.5-132.75
Age: 8,415 ± 65 **Corr. Age:** 8,015 ± 65 **Material:** Foraminifera
Weight (mg): 15.2 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.229
Comment: 425 forams collected

Lab. ID: AA - 31236 **GRL**-1432-S **Depth (cm):** 358.75-360
Age: 9,815 ± 70 **Corr. Age:** 9,415 ± 70 **Material:** Mollusc
Weight (mg): 43.8 **Genus:** *Yoldia* **Species:** *limatula*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.051
Comment: Bivalve

Lab. ID: AA - 26518 **GRL**-1335-S **Depth (cm):** 527
Age: 10,450 ± 85 **Corr. Age:** 10,050 ± 85 **Material:** Mollusc
Weight (mg): 16.6 **Genus:** *Nuculana* **Species:** *buccata*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.5
Sample Notes: core catcher + cutter

Stratigraphy: This site was located near the sill separating Skotufjordur from the main Isafjardurdup. Interpretation of the seismic stratigraphy is hampered by the gas content of the sediments (see Helgadóttir, 1997 for additional details).
Core Summary: (JTA, JH, AG, GH): This core is under study at the University of Iceland and at the University of Colorado. The core has been sampled in a u-tube and run through the University of California-Davis Cryogenic Magnetometer system (JH). Tephra grains have been extracted and are being processed by Dr K. Grönvold, Nordic Volcanology Institute in Iceland. Foraminifera have been processed by N. Weiner. The basal date was obtained from a shell extracted from sediment retrieved in the core catcher

Ísafjardardjúp

Core: B997-312 GGC

Location: NW Iceland, Inner to mid-Isafjardardjup
Lat.: 65˚ 58.9 **Long.:** -22˚ 29.4' **Depth (mwd):** 74

Lab. ID: NSRL - 10674 **GRL**-1479-S **Depth (cm):** 29-31
Age: 7,640 ± 45 **Corr. Age:** 7,240 ± 45 **Material:** Mollusc
Weight (mg): 149.5 **Genus:** *Macoma* **Species:** *calcarea*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.7
Contributor: G. Helgadóttir

Lab. ID: NSRL - 10675 **GRL**-1480-S **Depth (cm):** 122-123
Age: 8,920 ± 80 **Corr. Age:** 8,520 ± 80 **Material:** Mollusc
Weight (mg): 40.5 **Genus:** *Macoma* **Species:** *calcarea*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.2
Contributor: G. Helgadóttir

Lab. ID: NSRL - 10676 **GRL**-1481-S **Depth (cm):** 199-203
Age: 9,080 ± 50 **Corr. Age:** 8,880 ± 50 **Material:** Mollusc
Weight (mg): 77.3 **Genus:** *Yoldia* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.3
Contributor: G. Helgadóttir
Sample Notes: Broken shell

Stratigraphy: The core was taken on the basis of exisiting seismic data and earlier short gravity cores.
Core Summary: (GH/JTA): The dates suggest relatively rapid sedimentation in the interval ca 9-7 ka. There is the possibility that the uppermost sediment was not recovered during the coring operation.

Jökulfirdir

Core: B997-311 PC

Location: Jökulfirdir, north of the main Isafjordur fed by Drangel Ice Cap
Lat.: 66˚ 16.4' **Long.:** -22˚ 51.4' **Depth (mwd):** -100

Lab. ID: CAMS - 44862 **GRL**-1330-S **Depth (cm):** 328
Age: 9,140 ± 50 **Corr. Age:** 8,740 ± 50 **Material:** Mollusc
Weight (mg): 11.1 **Genus:** *Nucula* **Species:** *tenuis*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.5
Stratigraphy: From core catcher

Core Summary: (JTA): This date indicates a relatively slow rate of sediment accumulation in this branch fjord to the main Isafjardardjup trough. However, this date

can be compared with the much younger date at the base of B997-341PC
Reference: Andrews et al., in press

Core: B997-341 PC3

Location: NW Iceland, Jökulfirdir
Lat.: 66˚ 16.620' **Long.:** -22˚ 50.528' **Depth (mwd):** -96

Lab. ID: AA - 29210 **GRL**-1407-S **Depth (cm):** 220
Age: 2,980 ± 55 **Corr. Age:** 2,580 ± 55 **Material:** Mollusc
Weight (mg): 7.5 **Genus:** *Nucula* **Species:** *cf tenuis*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.935
Sample Notes: paired Nucula cf tenuis
Stratigraphy: Shell extracted from sediment in the core catcher

Core Summary: JTA/GH: Jokulfirdir is a side fjord in NW Iceland. Other dates from this basin include B997-311PC. This date indicates a rapid rate of sediment accumulation at this specific site compared with a significantly lower rate of accumulation at site 311.

Core: B997-342PC

Location: NW Iceland, Jökulfirdir
Lat.: 66˚ 16.51' **Long.:** -22˚ 51.67' **Depth (mwd):** 94

Lab. ID: AA - 31748 **GRL**-1468-S **Depth (cm):** 440
Age: 9,270 ± 80 **Corr. Age:** 8,870 ± 80 **Material:** Mollusc
Weight (mg): 22.8 **Genus:** *Yoldia* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -.2
Core Summary: (JTA/GH): This site can be compared to adajacent sites at B997-311 and -341 (this date list). The basal dates and core lengths indicate that rates of sediment accumulation vary significantly within this basin.

Reykjafjardaráll

Core: B997-324 SGC

Location: N Iceland, head of Reykjafjardaráll
Lat.: 66˚ 31.426 **Long.:** -21˚ 09.1325' **Depth (mwd):** -282

Lab. ID: CAMS - 46530 **GRL**-1382-S **Depth (cm):** 18-20
Age: 1,970 ± 60 **Corr. Age:** 1,570 ± 60 **Material:** Benthic foraminifera
Weight (mg): 3 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0

Contributor: J.T. Andrews
Comment: 167 *Nonionellina labradorica*
Stratigraphy: Sample is taken from halfway down the length of the core (total length 40 cm).

Core Summary: (LMS): The short gravity core from site B997-324 should have recovered the upper most sediments from the seafloor. Overlap of the short gravity core, and the upper date from B997-324 PC1 (AA-32975), indicate that both cores recovered the uppermost sediments from the seafloor. Sediment accumulation rates for recent sediments is on the order of 13 cm/1000 yrs.

Core: B997-324 PC1

Location: N Iceland, head of Reykjafjardaráll
Lat.: 66˚ 31.426 **Long.:** -21˚ 09.1325' **Depth (mwd):** -282

Lab. ID: AA - 32975 **GRL**-1503-S **Depth (cm):** 2-4
Age: 475 ± 65 **Corr. Age:** 75 ± 65 **Material:** Benthic Foraminifera
Weight (mg): 4.3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.3
Contributor: L.M. Smith
Comment: Four types benthics: 43 *Globobulimina auriculata*, 79 *Nonionellina labradorica*, 71 *Melonis zaandamae*, 2 *Polymorphinidae*
Stratigraphy: Sample taken from fine-grained mud with pebbles.

Lab. ID: AA - 33631 **GRL**-1515-S **Depth (cm):** 94-96
Age: 4,500 ± 80 **Corr. Age:** 4,100 ± 80 **Material:** Benthic Foraminifera
Weight (mg): 5.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: L.M. Smith
Comment: Five types benthics: 48 *Globobulimina auriculata*, 12 *Uvigerina peregrina*, 175 *Melonis zaandamae*, 27 *Cibicides lobatulus*, 8 *Quinqueloculina seminulum*
Stratigraphy: Sample taken from base of upper fine-grained mud with pebbles.

Lab. ID: AA - 33632 **GRL**-1516-S **Depth (cm):** 114-116
Age: 6,290 ± 100 **Corr. Age:** 5,890 ± 100 **Material:** Benthic Foraminifera
Weight (mg): 7.6 **Genus:** *Uvigerina* **Species:** *peregrina*
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: L.M. Smith
Comment: 118 *Uvigerina peregrina*
Stratigraphy: Sample taken from top of lithofacies change with increasing carbonate and decreasing ice-rafted debris and magnetic susceptibility.

Lab. ID: AA - 33011 **GRL**-1508-S **Depth (cm):** 150-152

Age: 9,650 ± 110 **Corr. Age:** 9,250 ± 110 **Material:** Benthic Foraminifera
Weight (mg): 5.6 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.4
Contributor: L.M. Smith
Comment: Three species benthics: 10 *Globobulimina auriculata*, 112 *Nonionellina labradorica*, 38 *Melonis zaandamae*
Stratigraphy: Sample taken from top of the lower unit of fine-grained mud with pebbles. Turbidite deposit of Vedde Ash is ca. 20 cm below this date.

Lab. ID: AA - 33012 **GRL**-1509-S **Depth (cm):** 190-192
Age: 10,090 ± 120 **Corr. Age:** 9,690 ± 120 **Material:** Benthic Foraminifera
Weight (mg): 3.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.0
Contributor: L.M. Smith
Comment: 53 *Nonionellina labradorica*, 53 *Elphidium excavatum* fm *clavata*, 51 *Islandiella norcrossi*, 37 *Melonis zaandamae*, 15 *Stainforthia concava*, 13 *Nonion turgida*, 8 *Cassidulina reniforme*, 5 *Cassidulina teretis*, 4 *Cibicides lobatulus*, 3 *Astrononion gallowayi*, 1 *Angulogerina angulosa*
Stratigraphy: This sample was taken from below the Vedde Ash deposit in order to test whether the ash layer was a primary or secondary (turbidite) deposit.

Lab. ID: AA - 33013 **GRL**-1510-S **Depth (cm):** 248-252
Age: 10,580 ± 95 **Corr. Age:** 10,180 ± 95 **Material:** Foraminifera
Weight (mg): 5.3 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.7
Contributor: L.M. Smith
Comment: 123 *Nonionellina labradorica*
Stratigraphy: Sample taken from lower unit of fine-grained mud with pebbles.

Lab. ID: AAR - 3888 **GRL**-1322-S **Depth (cm):** > 283
Age: 9,720 ± 110 **Corr. Age:** 9,320 ± 110 **Material:** Benthic Foraminifera
Weight (mg): 5.7 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: L.M. Smith
Comment: 103 *Cassidulina teretis*, 67 *Cassidulina sp.*, 40 *Cibicides lobatulus*, 29 *Elphidium sp.*, 24 *Melonis zaandamae*, 18 *Islandiella norcrossi (helenae)*, 16 *Nonionellina labradorica*, 11 *Angulogerina angulosa*, 9 *Globobulimina auriculata*, *8 Pullenia bulloides*, 7 *Uvigerina sp.*, 6 *Pyrgo sp.*, 3 *Nonion grateloupi*, 2 *Buccella frigida*, 1 *Oolina sp.*, 1 *Miliolid*
Stratigraphy: Sample extracted from material in the core cutter.

Significance: (LMS/JTA): This core has been opened and described by LMS as part of her PhD dissertation at the University of Colorado.
Core Summary: (LMS) Core B997-324 PC1 recovered high-resolution Holocene marine sediments, with highest sediment accumulation in the early Holocene (late

Younger Dryas to PreBoreal). The basal age of the core is thought to be too young. Sedimentation rapidly declines in the mid Holocene after 6000 14C yrs. There is a layer of Vedde Ash (173-178 cm) that is interpreted as a debris flow deposit based on the radiocarbon dates, the erosional base, and the presence of foraminifera within the ash. A primary ash fall would be composed on only tephra.
References: Smith et al., 1999; Andrews et al., in press

Core: B997-325 PC

Location: N Iceland, Reykjafjardaráll
Lat.: 64˚ 16.5' **Long.:** -24˚ 01.4' **Depth (mwd):** -349

Lab. ID: CAMS - 44869 **GRL**-1362-S **Depth (cm):** 271
Age: 9,430 ± 50 **Corr. Age:** 9,030 ± 50 **Material:** Foraminifera
Weight (mg): 10.8 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Assumed δ^{13}**C (‰):**
Comment: 250 individuals
Stratigraphy: From foraminifera extracted from sediment retained in the core catcher

Core Summary: (JTA/GH): This date indicates that the rate of sediment accumulation in the mid section of Reykjafjardaráll has averaged ca. 30 cm/ky over the last 9,000 years. This core is being studied by James Bendle, University College of London, UK (Bendle, 1999).

Core: B997-326 PC1

Location: N Iceland, Reykjafjardaráll
Lat.: 66˚ 36.35' **Long.:** -20˚ 54.82' **Depth (mwd):** -358

Lab. ID: AA - 32966 **GRL**-1494-S **Depth (cm):** 10-12
Age: 3,690 ± 70 **Corr. Age:** 3,290 ± 70 **Material:** Foraminifera
Weight (mg): 3.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.0
Contributor: E. James
Sample Notes: Mixed benthic foraminifera. 91 *Islandiella norcrossi*, 122 *Melonis zaandamae*, 7 *Cibicides lobatulus*, 17 *Nonionellina labradorica*, 14 *Cassidulina reniforme*, 12 *Globobulimina auriculata*, 19 *Pullenia bulloides*, 19 *Angulogerina angulosa, 16 in 5 other spp.*
Stratigraphy: Sample taken near top of greenish gray, silty mud.

Lab. ID: AA - 34401 **GRL**-1527-S **Depth (cm):** 16-21
Age: 9,040 ± 110 **Corr. Age:** 8,640 ± 110 **Material:** Foraminifera
Weight (mg): 4.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.2

Contributor: Eric James
Sample Notes: Mixed benthic foraminifera 105 *Melonis zaandamae* and 12 other species
Stratigraphy: Sample taken from upper unit of dark greenish gray silty clay.

Lab. ID: AA - 34402	**GRL**-1528-S	**Depth (cm):** 108-114
Age: 9,580 ± 100	**Corr. Age:** 9.180 ± 100	**Material:** Foraminifera
Weight (mg): 5.0	**Genus:** see below	**Species:**
δ^{13}**C:** Measured	δ^{13}**C (‰):** -9.0	

Contributor: E. James
Sample Notes: Mixed benthic foraminifera 1815 *Stainforthia concava*, 111 *Cassidulina reniforme*, 74 *Elphidium excavatum* fm *clavata*
Stratigraphy: Sample taken from within weakly stratified, muddy diamicton with very few pebbles.

Lab. ID: AA - 34403	**GRL**-1529-S	**Depth (cm):** 196-200
Age: 23,570 ± 340	**Corr. Age:** 23,170 ± 340	**Material:** Foraminifera
Weight (mg): 4.7	**Genus:**	**Species:**
δ^{13}**C:** Measured	δ^{13}**C (‰):** 0.1	

Contributor: E. James
Sample Notes: Mixed benthic foraminifera 284 *Cassidulina reniforme*, 85 *Cibicides lobatulus*

Stratigraphy: The 3.5 kHz profile across this site (Helgadóttir, 1997) suggests that the drift-like feature in Hunafloall is eroded at the 326 site. The differences in stratigraphy between 326PC1 and 326PC2 (James, 1999) indicate that 326PC1 penetrated the basal diamicton (see comments on B997-322 and -323)

Core Summary: JTA/EJ: B997-326PC1 consists of about 1 m of diamicton below the date from AA-34403. The numbers of foraminifera are low but consistent from ca 200 cm to near the top of the core. There appears to be a histus or unconformity on sediment properties at ca 20 cm core depth (James, 1999; James and Andrews, 1999).

Core: B997-326 PC2

Location: N Iceland, Reykjafjardaráll

Latitude: 66˚ 36.33	**Long.:** -20˚ 55.435’	**Depth (mwd):** -351

Lab. ID: AA - 34404	**GRL**-1530-S	**Depth (cm):** 0-1
Age: 280 ± 60	**Corr. Age:** modern	**Material:** Foraminifera
Weight (mg): 5.2	**Genus:** see below	**Species:**
δ^{13}**C:** Measured	δ^{13}**C (‰):** -1.6	

Contributor: E. James
Sample Notes: Mixed benthics 61 *Globobulimina auriculata*, 37 *Nonionellina labradorica*, 84 *Melonis zaandamae* plus 6 other species

Stratigraphy: Sample taken from core top to test whether or not the core recovered modern sediments.

Lab. ID: NSRL - 10785 **GRL**-1518-S **Depth (cm):** 50
Age: 1,970 ± 60 **Corr. Age:** 1,570 ± 60 **Material:** Mollusc
Weight (mg): 29.1 **Genus:** **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Contributor: E. James
Sample Notes: Scaphopod, pieces of *Dentalium* sp.
Stratigraphy: Sample taken from within upper unit of silty mud.

Lab. ID: AA - 34405 **GRL**-1531-S **Depth (cm):** 74-76
Age: 6,810 ± 80 **Corr. Age:** 6,410 ± 80 **Material:** Mollusc
Weight (mg): 12.1 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.4
Contributor: E. James
Sample Notes: gastropod Retusa or Haminoae type
Stratigraphy: Sample taken from above dark ash layer.

Lab. ID: AA - 33842 **GRL**-1520-S **Depth (cm):** 153-155
Age: 13,155 ± 95 **Corr. Age:** 12,755 ± 95 **Material:** Foraminifera
Weight (mg): **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.2
Contributor: E. James
Sample Notes: 152 individuals. Forams noted as being in excellent condition.

Stratigraphy: The 3.5 kHz profile across this site (Helgadóttir, 1997) suggests that the drift-like feature in Hunafloall is eroded at the 326 site. The differences in stratigraphy between 326PC1 and 326PC2 (James, 1999) indicate that 326PC1 penetrated the basal diamicton (see comments on B997-322 and -323)
Core Summary: (JTA/EJ): The basal date from B997-326PC2 is similar to other dates above a diamicton/mud transition in cores B997-322 and -323 (this date list). A prominent ash layer at ca 65-75 cm has geochemical similarities with the Vedde ash (Grönvald, person commun. 1999) but the date from within this event is much younger, suggesting that the ash was brought into the site or was exposed and bioturbated by younger faunas (James, 1999)

Core: B997-327 PC

Location: N Iceland, Reykjafjardaráll
Lat.: 66˚ 38.485’ **Long.:** -20˚ 51.793’ **Depth (mwd):** -373

Lab. ID: CAMS - 44870 **GRL**-1363-S **Depth (cm):** 329.5
Age: 4,560 ± 50 **Corr. Age:** 4,160 ± 50 **Material:** Foraminifera
Weight (mg): 9.2 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.3

Sample Notes: 150 *Globobulimina auriculata*
Stratigraphy: Foraminifera extracted from sediments retained in the core catcher

Core Summary: (JTA/GH) This site is in the middle of Reykjafjardaráll. The basal date confirms the 3.5 kHz acoustic stratigraphy in-so-far as the basin fill thickens toward the center of this trough. The rate of sediment accumulation is significantly higher at this site than sites closer to the trough margins (e.g. B997-324PC and 325PC, this report) (Andrews et al., in press). We obtained a giant piston core (MD99-2269) at this site in 1999 (25 m in length) as part of the international IMAGES V cruise on the French R/V Marion Dufresne.

Húnaflóadjúp

Core: B997-322 PC2

Location: N Iceland, Húnaflóadjúp
Lat.: 66˚ 56.294' **Long.:** -19˚ 46.553' **Depth (mwd):** -357

Lab. ID: AA - 32957 **GRL**-1485-S **Depth (cm):** 8-10
Age: 1,900 ± 60 **Corr. Age:** 1,500 ± 60 **Material:** Foraminifera
Weight (mg): 4.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.9
Contributor: J.T. Andrews, G. Helgadóttir
Comment: mixed benthics: 62 *Islandiella norcrossi*, 126 *Melonis zaandamae*, 32 *Nonionellina labradorica*, 30 *Pullenia bulloides*, 27 *Angulogerina angulosa*, 13 *Cassidulina teretis*, 4 *Globobulimina auriculata*, 21 in 4 other species
Stratigraphy: Sample taken to test if the core recovered modern sediments. The upper 8 cm of the core was empty, so this sample represents the core top.

Lab. ID: AA - 32958 **GRL**-1486-S **Depth (cm):** 18-20
Age: 3,810 ± 70 **Corr. Age:** 3,410 ± 70 **Material:** Foraminifera
Weight (mg): 7.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.8
Contributor: J.T. Andrews, G. Helgadóttir
Comment: mixed benthics: 131 *Melonis zaandamae*, 120 *Islandiella norcrossi*, 50 *Nonionellina labradorica*, 19 *Pullenia bulloides*, 19 *Globobulimina auriculata*, 23 in 4 other species
Stratigraphy: Sample taken from within upper Holocene mud.

Lab. ID:AA - 32959 **GRL**-1487-S **Depth (cm):** 38-40
Age: 11,970 ± 130 **Corr. Age:** 11,570 ± 130 **Material:** Foraminifera
Weight (mg):3.6 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.2
Contributor: J.T. Andrews, G. Helgadóttir

Comment: mixed benthics: 90 *Islandiella norcrossi*, 87 *Melonis zaandamae*, 53 *Elphidium spp*., 14 *Cibicides lobatulus*, 11 *Astrononion gallowayi*, 16 *Nonionellina labradorica*, 5 in 3 other species

Stratigraphy: Sample taken at boundary between overlying Holocene mud, and underlying diamicton.

Lab. ID: AA - 32960 **GRL**-1488-S **Depth (cm):** 76-80
Age: 9,120 ± 130 **Corr. Age:** 8,720 ± 130 **Material:** Foraminifera
Weight (mg): 2.5 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.1
Contributor: J.T. Andrews, G. Helgadóttir

Comment: mixed benthics: 30 *Islandiella norcrossi*, 18 *Elphidium spp*., 16 *Cibicides lobatulus*, 7 *Melonis zaandamae*, 11 *Elphidium excavatum* fm *clavata*, 11 in 6 other spp.

Stratigraphy: Sample taken from within gray diamicton.

Lab. ID: AA - 32961 **GRL**-1489-S **Depth (cm):** 136-140
Age: >37,800 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 1.3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.1
Contributor: J.T. Andrews, G. Helgadóttir

Comment: mixed benthics: 39 *Islandiella norcrossi*, 31 *Melonis zaandamae*, 18 *Elphidium spp*, 13 *Cassidulina reniforme*, 14 *Cibicides lobatulus*, 7 *Pullenia bulloides*, 9 *Elphidium excavatum* fm *clavata*, 12 in 7 other spp.

Stratigraphy: Sample taken from within lowermost unit of gray diamicton.

Lab. ID: AAR - 3887 **GRL**-1321-S **Depth (cm):** 162
Age: 42,600 ± 3050 **Corr. Age:** 42,200 ± 3050 **Material:** Foraminifera
Weight (mg): 7.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor:

Comment: mixed planktic and benthics >150 screen: 121 *Neogloboquadrina pachyderma* (s.), 116 *Islandiella norcrossi*, 70 *Melonis zaandamae*, 36 *Cibicides lobatulus*, 45 *Elphidium excavatum* f. *clavata*, 15 *Nonionellina labradorica*, 12 *Cassidulina reniforme*, 31 individuals from 5 other species

Stratigraphy: The 3.5 kHz profile from the site of 322 shows an undulating topgraphy with relief of a a few meters. No transparent upper unit was resolvable with the 3.5 Khz system and this is in keeping with the described stratigraphy which shows a diamicton/mud transition at ca 40 cm.

Core Summary: (JTA, GH): This short core consists of a short upper interval of mud overlying a stony diamicton. The contact between the two lithofacies is abrupt. Thus the stratigraphy is similar to that in B997-323PC (see this report; Andrews et al., in press). Work is in progress on the foraminifera (GH) and sedimentology (JTA) to evaluate the date and its interpretation (Andrews and Helgadóttir, 1999).

Core: B997-323 PC

Location: N Iceland, Húnaflóadjúp
Lat.: 66˚ 50.788' **Long.:** -20˚ 13.644' **Depth (mwd):** -397

Lab. ID: AA - 33633 **GRL**-1517-S **Depth (cm):** 37-38.25
Age: 8,520 ± 110 **Corr. Age:** 8,120 ± 110 **Material:** Foraminifera
Weight (mg): 5.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.3
Contributor: G. Helgadóttir
Sample Notes: Mixed benthic foraminifera: 114 *Melonis zaandamae,* 44 *Nonionellina labradorica*, 40 *Islandiella norcrossi*, 14 *Globobulimina auriculata*
Stratigraphy: Sample taken near base of a sandy mud layer.

Lab. ID: AA - 34400 **GRL**-1526-S **Depth (cm):** 58-60
Age: 13,100 ± 130 **Corr. Age:** 12,700 ± 130 **Material:** Foraminifera
Weight (mg): 5.2 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.3
Contributor: G. Helgadóttir
Sample Notes: Benthic foraminifera: 139 *Nonionellina labradorica,* and 130 large *Elphidium excavatum* fm *clavata*
Stratigraphy: Sample taken from within silty clay.

Lab. ID: AA - 32963 **GRL**-1491-S **Depth (cm):** 70-71.25
Age: 13,440 ± 190 **Corr. Age:** 13,040 ± 190 **Material:** Foraminifera
Weight (mg): 4.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.5
Contributor: G. Helgadóttir
Sample Notes: Mixed benthic and planktic foraminifera: 230 *Neogloboquadrina pachyderma* (s.), 86 *Cassidulina teretis,* 32 *Melonis zaandamae,* 38 *Pullenia bulloides,* 12 *Nonionellina labradorica,* 13 *Nonion auricula,* 19 *Elphidium excavatum* fm *clavata,* 19 *Cassidulina reniforme,* 19 *Buccella frigida,* 28 *Buccella hannai arctica,* & *Cibicides lobatulus,* 9 in 7 other spp.
Stratigraphy: Sample taken from within silty clay unit.

Lab. ID: AA - 32964 **GRL**-1492-S **Depth (cm):** 88.75-91.25
Age: >25,900 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 3.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.6
Contributor: G. Helgadóttir
Sample Notes: Mixed benthic foraminifera: *52 Islandiella norcrossi,* 33 *Cassidulina reniforme,* 28 *Melonis zaandamae,* 20 *Elphidium excavatum* fm *clavata,* 12 *Cibicides lobatulus,* 7 *Cassidulina teretis,* 8 *Nonionellina labradorica,* 8 *Elphidium spp.,* 9 *Pullenia bulloides,* 17 in 7 other spp.

Stratigraphy: Sample taken at boundary between overlying silty clay and underlying stiffer silty clay with pebbles.

Lab. ID: AA - 32965 **GRL**-1493-S **Depth (cm):** 238.75-241.25
Age: >30,500 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 1.6 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.8
Contributor: G. Helgadóttir
Sample Notes: Mixed benthic foraminifera: 96 *Cassidulina reniforme,* 59 *Islandiella norcrossi,* 32 *Cibicides lobatulus,* 27 *Elphidium excavatum* fm *clavata,* 22 *Melonis zaandamae,* 25 *Cassidulina teretis,* 9 *Nonionellina labradorica,* 8 *Stainforthia concava,* 21 *Elphidium spp*., 22 in 11 other spp.
Stratigraphy: Sample taken from within stiff, gray mud with pebbles.

Lab. ID: AA - 27763 **GRL**-1361-S **Depth (cm):** 292
Age: 25,330 ± 640 **Corr. Age:** 24,930 ± 640 **Material:** Foraminifera
Weight (mg): 6.1 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.181
Contributor: G. Helgadóttir
Sample Notes: Mixed planktic and benthic foraminifera: 33 *Neogloboquadrina pachyderma* (s.), 104 *Islandiella norcrossi,* 73 *Melonis zaandamae,* 35 *Elphidium excavatum* fm *clavata,* 30 *Cibicides lobatulus,* 16 *Nonionellina labradorica,* 14 *Cassidulina reniforme,* 17 in 5 other spp.

Stratigraphy: This core site lies beyond a small "drift-like" unit which fills the middle part of Hunafloaall (see profiles in Helgadóttir, 1997). The 3.5 kHz profile shows little transparent sediment at the site which is in keeping with the sharp diamicton/mud contact at 80 cm.
Core Summary: (JTA/GH/AEJ): The basal date initially suggested that this core extends through Marine Isotope Stage 2. The core consists of an upper 80 cm of olive gray mud overlying a pebbly mud. However, subsequent dating within the diamicton indicates that there is no simple decrease of age toward the abrupt contact with the overlying unit. The abrupt transition occurs ca. 13 ka during the Bolling/Allerod warm interval. This core is presently being studied for its foraminifera (GH & AEJ) and sedimentology (JTA) (Helgadóttir and Andrews, 1999).

Ingólfsfjördur

Core: B997-332 PC

Location: Ingólfsfjördur
Lat.: 66˚ 08.059’ **Long.:** -21˚ 38.422’ **Depth (mwd):** -108

Lab. ID: CAMS - 44871 **GRL**-1364-S **Depth (cm):** 530
Age: 10,370 ± 60 **Corr. Age:** 9,970 ± 60 **Material:** Foraminifera

Weight (mg): 5.6 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -4.9
Sample Notes: 150 *Nonionellina labradorica*
Stratigraphy: Basal date obtained from core catcher sediments.

Core Summary: (JTA/GH): This date indicates that rates of sediment accumulation in the small north coast fjords are moderately high and thus should be suitable for high-resolution studies of changes in the land/ocean interactions of decadal to centuries time-scales (Andrews et al., in press). This core has now been opened and other dates have been submitted for age determinations.

Reykjafjördur

Core: B997-328 PC

Location: N Iceland, Reykjafjördur
Lat.: 65˚ 57.4' **Long.:** -21˚ 33.1' **Depth (mwd):** -94

Lab. ID: NSRL - 10182 **GRL**-1426-S **Depth (cm):** 3.75-5
Age: 175 ± 65 **Corr. Age:** Modern **Material:** Gastropod
Weight (mg): 39.4 **Genus:** *Turritella* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.6

Lab. ID: NSRL - 10673 **GRL**-1427-S **Depth (cm):** 35-36.25
Age: 550 ± 35 **Corr. Age:** 150 ± 35 **Material:** Mollusc
Weight (mg): 116.5 **Genus:** partial shell **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.8
Sample Notes: Not able to identify.

Lab. ID: NSRL - 10680 **GRL**-1506-S **Depth (cm):** 73.75-76.25
Age: 800 ± 40 **Corr. Age:** 400 ± 40 **Material:** Mollusc
Weight (mg): 40.0 **Genus:** *Nucula* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.3
Sample Notes: partly broken valve

Lab. ID: CAMS - 46520 **GRL**-1372-S **Depth (cm):** 108-110
Age: 1,460 ± 50 **Corr. Age:** 1,060 ± 50 **Material: Mollusc**
Weight (mg): 112.6 **Genus:** *Nuculana* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0

Lab. ID: CAMS - 46521 **GRL**-1373-S **Depth (cm):** 125
Age: 1,230 ± 50 **Corr. Age:** 830 ± 50 **Material:** Mollusc
Weight (mg): 29.7 **Genus:** *Nucula* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.5

Lab. ID: CAMS - 46522 **GRL**-1374-S **Depth (cm):** 168-169

Age: 1,970 ± 50 **Corr. Age:** 1,570 ± 50 **Material:** Mollusc
Weight (mg): 223 **Genus:** *Yoldia* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.2

Lab. ID: CAMS - 46523 **GRL**-1375-S **Depth (cm):** 257-259
Age: 2,660 ± 50 **Corr. Age:** 2,260 ± 50 **Material:** Mollusc
Weight (mg): 327.1 **Genus:** Macoma **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.1

Lab. ID: NSRL - 10681 **GRL**-1507-S **Depth (cm):** 288.75-291.25
Age: 2,990 ± 35 **Corr. Age:** 2,590 ± 35 **Material:** Mollusc
Weight (mg): 34.3 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.6
Sample Notes: No id., fragmented shell

Lab. ID: NSRL - 10183 **GRL**-1428-S **Depth (cm):** 300-301.25
Age: 2,620 ± 45 **Corr. Age:** 2,220 ± 45 **Material:** Mollusc
Weight (mg): 50 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.4

Lab. ID: NSRL - 10184 **GRL**-1429-S **Depth (cm):** 350-351.25
Age: 3,660 ± 55 **Corr. Age:** 3,260 ± 55 **Material:** Mollusc
Weight (mg): 9.5 **Genus:** *Nucula* **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.6
Sample Notes: paired bivalve

Lab. ID: CAMS - 44863 **GRL**-1331-S **Depth (cm):** 422
Age: 4,680 ± 50 **Corr. Age:** 4,280 ± 50 **Material:** Mollusc
Weight (mg): 232.1 **Genus:** *Yoldia* **Species:** cf *myalis*
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.5

Stratigraphy: The site is taken on the landward edge of the fjord basin. The surface is flat with no obvious evidence of debris flows off the margin. 3.5 kHz penetration of the sediment was masked, probably by gas, hence no detailed stratigraphic relations were observable. The core is one lithologic unit of silty mud that may be faintly laminated, very analogous to gyttja in lakes. All of the radiocarbon dates for this core were obtained on shells recovered in the sediments.
Core Summary: (JTA): This core was taken to obtain a high resolution records at the fjord head of one of the north coast smaller fjords. A total of 11 dates have been obtained from this core. Data from this site have been submitted for publication (Andrews et al., subm.)

Byrgisvikurpollur

Core: B997-330 SGC

Location: N Iceland, Byrgisvikurpollur
Lat.: 65˚ 52.0’ **Long.:** -21˚ 04.9’ **Depth (mwd):** -165

Lab. ID: CAMS - 46531 **GRL**-1383-S **Depth (cm):** 19-20
Age: 610 ± 60 **Corr. Age:** 210 ± 60 **Material:** Foraminifera
Weight (mg): 4.0 **Genus:** see below **Species:**
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0.0
Comment: 56 *Nonionellina labradorica*, 49 *Islandiella norcrossi*, 26 *Cibicides lobatulus*, 9 *Pyrgo spp.*, 9 *Cassidulina teretis*, 19 *Islandiella islandica*, 7 *Buccella tenerrima*, 2 *Robertinoides*, 2 *Globobulimina auriculata*.

Core Summary: (JTA): This small gravity corer was raised from the same site as 330PC (this date list) to ensure that we have captured the uppermost part of the sediment column. The radiocarbon date suggests a rate of sediment accumulation of ~ 1 cm/10 ky.

Core: B997-330 PC

Location: N Iceland, Byrgisvikurpollur
Lat.: 65˚ 52.0’ **Long.:** -21˚ 04.9’ **Depth (mwd):** -165

Lab. ID: CAMS - 44864 **GRL**-1332-S **Depth (cm):** 540
Age: 9,420 ± 60 **Corr. Age:** 9,020 ± 60 **Material:** Foraminifera
Weight (mg): 7.9 **Genus:** *Nonionellina* **Species:** *labradorica*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.8
Comment: 300 *Nonionellina labradorica*
Stratigraphy: Basal date from sediments retained in the core catcher.

Core Summary: (JTA): This was the longest core obtained on the B997 cruise. The core was obtained from a small basin on the inner shelf and was taken so as to obtain a maximum basal date (see 3.5 kHz record in Andrews et al., in press.; Helgadóttir, 1997).

Eyjafjardaráll

Core: B997-317 PC1

Location: N Iceland shelf, middle of Eyjafjardaráll
Lat.: 66˚ 35 270’ **Long.:** -18˚ 51’ **Depth (mwd):** -494

Lab. ID: AA - 29196 **GRL**-1393-S **Depth (cm):** 1.25-2.5
Age: 290 ± 65 **Corr. Age:** **Material:** Mollusc
Weight (mg): 3.0 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.614
Contributor: G.B. Kristjánsdóttir
Sample Notes: bivalves: one paired, one fragmented

Stratigraphy: Top of soft, olive green Holocene mud.

Lab. ID: AAR - 4475 **GRL**-1418-S **Depth (cm):** 58.75-61.25
Age: 1,525 ± 45 **Corr. Age:** 1,125 ± 45 **Material:** Foraminifera
Weight (mg): 5.1 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):**
Contributor: G.B. Kristjánsdóttir
Sample Notes: 20 *Globobulimina auriculata*, 58 *Nonionellina labradorica*, 49 *Melonis zaandamae*, 45 *Islandiella norcrossi*, 6 *Pullenia bulloides*, 4 *Cassidulina reniforme*, 2 *Nonion sp.*
Stratigraphy: This date is from within the Holocene mud in the core.

Lab. ID: AAR - 4476 **GRL**-1419-S **Depth (cm):** 140-141.25
Age: 3,520 ± 90 **Corr. Age:** 3,120 ± 90 **Material:** Foraminifera
Weight (mg): 4.1 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1
Contributor: G.B. Kristjánsdóttir
Sample Notes: 11 *Globobulimina auriculata*, 34 *Nonionellina labradorica*, 82 *Melonis zaandamae.*, 52 *Islandiella norcrossi*, 4 *Cibicides lobatulus*
Stratigraphy: This date is just above the top of the transition zone.

Lab. ID: AAR - 4477 **GRL**-1420-S **Depth (cm):** 161.25-163.75
Age: 10,130 ± 140 **Corr. Age:** 9,730 ± 140 **Material:** Foraminifera
Weight (mg): 5.1 **Genus:** see below **Species:**
δ^{13}**C**: Measured δ^{13}**C (‰):**
Contributor: G.B. Kristjánsdóttir
Sample Notes: 170 *Nonionellina labradorica*, 110 *Islandiella norcrossi*, 50 *Melonis zaandamae.*
Stratigraphy: This date is located at the transition between glacial marine mud and the transition zone.

Lab. ID: AAR - 4209 **GRL**-1360-S **Depth (cm):** 245
Age: 12,270 ± 100 **Corr. Age:** 11,870 ± 100 **Material:** Foraminifera
Weight (mg): 5.1 **Genus:** **Species:**
δ^{13}**C**: Measured δ^{13}**C (‰):** -1.35
Contributor: G.B. Kristjánsdóttir
Sample Notes: 79 *Nonionellina labradorica*, 20 *Cassidulina teretis*, 70 *Melonis zaandamae*, 1 *Dentalina sp.*, 49 *Islandiella norcrossi* δ^{18}O=3.99
Stratigraphy: Basal date from the core catcher, in stiff, grey glacial marine mud.

Core Summary: (GBK): Core B997-317PC1 contains two lithofacies: Holocene mud and glacial marine mud. The Holocene mud is soft, olive green with low magnetic susceptibility, high carbon content and an average sedimentation rate of 43 cm/kyr. The glacial marine mud is stiff, grey with higher magnetic susceptibility, low carbon content and IRD. The sedimentation rate ranges from 8 cm/kyr to 140 cm/kyr, most likely

reflecting a retreating glaciar located somewhere south of the study area. Between the two before mentioned lithofacies lies a 15-20 cm transition zone. This transition zone is most likely a gravity flow deposit, containing a mix of marine and glacial marine mud and close to its base, at 163 cm, is a layer of reworked Vedde tephra. The study area is located in the westernmost part of the tectonically active area, the Tjornes Fracture Zone. Therefore, the gravity flows are believed to be triggered by earthquakes. Radiocarbon dates from nearby cores suggest the earthquakes occurred sometime between 7000 and 3500 14C years BP. Because of the apparent erosion associated with the gravity flow events, the onset of modern marine sedimentation in the area cannot be ascertained.
Reference: Andrews et al., in press

Core: B997-319 GGC

Location: N. Iceland Shelf, middle of Eyjafjardaráll
Lat.: 66˚ 26.820' **Long.:** -18˚ 50.240' **Depth (mwd):** -418

Lab. ID: AA - 29197 **GRL**-1394-S **Depth (cm):** 0-1.25
Age: 725 ± 85 **Corr. Age:** 325 ± 85 **Material:** Foraminifera
Weight (mg): 3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.972
Contributor: G.B. Kristjánsdóttir
Sample Notes: 29 *Globobulimina auriculata* + pieces, 41 *Nonionellina labradorica*, 13 *Pullenia bulloides*, 26 *Islandiella norcrossi*, 40 *Melonis zaandamae*, 6 *Cibicides lobatulus*, 6 *Nonion grateloupi*
Stratigraphy: Top of soft, olive green Holocene mud, at the core top.

Lab. ID: AAR - 4479 **GRL**-1422-S **Depth (cm):** 48.75 - 50
Age: 2,130 ± 75 **Corr. Age:** 1,730 ± 75 **Material:** Foraminifera
Weight (mg): 6.1 **Genus:** *Globobulumina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.5
Contributor: G.B. Kristjánsdóttir
Sample Notes: 56 *Globobulumina auriculata*+ pieces
Stratigraphy: This date is near the base of Holocene mud, just above the top of the transition zone.

Lab. ID: AAR - 4206 **GRL**-1357-S **Depth (cm):** 65-66.25
Age: 4,145 ± 50 **Corr. Age:** 3,745 ± 50 **Material:** Mollusc
Weight (mg): 5.1 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -3.05
Contributor: G.B. Kristjánsdóttir
Sample Notes: broken bivalve and a scaphopod, δ^{18}O =3.15 ‰
Stratigraphy: In the transition zone, which is a mix of Holocene and glacial marine mud.
Significance: Close to the base of the transition zone between the Holocene marine mud

and glacial marine mud.

Lab. ID: AAR - 4207 **GRL**-1358-S **Depth (cm):** 66.25 - 67.5
Age: 3,950 ± 45 **Corr. Age:** 3,550 ± 45 **Material:** Mollusc
Weight (mg): 18.3 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.0
Contributor: G.B. Kristjánsdóttir
Sample Notes: broken bivalves, possibly 2 different species
Stratigraphy: In the transition zone, which is a mix of Holocene and glacial marine mud.
Significance: Close to the base of the transition zone between the Holocene marine mud and glacial marine mud.

Lab. ID: AAR - 4208 **GRL**-1359-S **Depth (cm):** 73.75 - 75
Age: 7,170 ± 70 **Corr. Age:** 6,770 ± 70 **Material:** Mollusc
Weight (mg): 6.2 **Genus:** Scaphopod **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.9
Contributor: G.B. Kristjánsdóttir
Sample Notes: Broken scaphopod, δ^{18}O =4.16 ‰
Stratigraphy: In stiff, grey glacial marine mud, just below the transition zone.
Significance: Top of glacial marine mud. This date is suspiciously young compared to a date of 7540+/-40BP for the Holocene mud in core B997-321PC. A problable explanation is that the mollusc is not insitu, but bored down into the glacial marine mud.

Lab. ID: AAR - 4480 **GRL**-1423-S **Depth (cm):** 75-76.25
Age: 8,200 ± 90 **Corr. Age:** 7,800 ± 90 **Material:** Foraminifera
Weight (mg): 6.0 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.36
Contributor: G.B. Kristjánsdóttir
Sample Notes: 21 *Globobulimina auriculata,* 134 *Melonis zaandamae,* 56 *Islandiella norcrossi,* 9 *Nonionellina labradorica,* 2 *Cibicides lobatulus*
Stratigraphy: This date is located just below the transition zone. It was obtained in order to verify a date of 7170±70 BP on a shell at 74-75 cm depth in the core. It indicates that the shell date might be too young for this interval in the core, possibly being affected by the overlying gravity flow deposit.

Lab. ID: AAR - 4481 **GRL**-1424-S **Depth (cm):** 114-116.5
Age: 11,980 ± 140 **Corr. Age:** 11,580 ± 140 **Material:** Foraminifera
Weight (mg): 7.3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1
Contributor: G.B. Kristjánsdóttir
Sample Notes: 27 *Nonionellina labradorica,* 98 *Melonis zaandamae ,* 74 *Islandiella norcrossi,* 36 *Elphidium excavatum ,* 40 *Elphidium excavatum* fm *clavata,* 4 *Elphidium sp.,* 10 *Cassidulina teretis,* 3 *Astrononion gallowayi,* 18 *Cassidulina reniforme,* 3 *Cibicides lobatulus*
Stratigraphy: This is a date from within an IRD band in the glacial marine mud.

Lab. ID: AA - 29184 **GRL**-1369-S **Depth (cm):** 173
Age: 12,100 ± 110 **Corr. Age:** 11,700 ± 110 **Material:** Foraminifera
Weight (mg): 9 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.623
Contributor: G.B. Kristjánsdóttir
Sample Notes: Benthic forams: 255 *Elphidium excavatum* fm *clavata,* 55 *Elphidium excavatum, Melonis zaandamae* , 87 *Islandiella norcrossi*,9 *Nonionellina labradorica,* 6 *Globobulimina auriculata*
Stratigraphy: Basal date for this core, from the core catcher. In stiff, grey glacial marine mud which contains IRD.
Significance: Basal date

Core Summary: (GBK): Core B997-319GGC is one of two cores that have been opened from station B997-319. This gravity core, which has a basal date of 12,100 BP, penetrates deeper into the mud than the piston core from the same station. Core B997-319GGC has 2 lithofacies, Holocene mud and glacial marine mud. The Holocene mud is soft, olive green with low magnetic susceptibility, high carbon content, and an average sedimentation rate of 35 cm/kyr. The glacial marine mud is stiff, grey with high magnetic susceptibility, low carbon content and IRD. The sedimentation rate for the glacial marine mud ranges from 1.2 cm/kyr to 479 cm/kyr, most likely reflecting a retreating glacier and thus a diminishing sediment supply. Between the two lithofacies is a 20-25 cm transition zone. The transition zone is most likely a gravity flow deposit, similar to what is found in core B997-317PC1, containing a mix of marine and glacial marine mud (see further description of the transition zone in the description for core B997-317PC1).

Core: B997-319 PC2

Location: N Iceland Shelf, middle of Eyjafjardaráll
Lat.: 66˚ 26.530’ **Long.:** -18˚ 51.060’ **Depth (mwd):** -422

Lab. ID: AA - 29220 **GRL**-1417-S **Depth (cm):** 5.75-8.25
Age: 565 ± 75 **Corr. Age:** 165 ± 75 **Material:** Foraminifera
Weight (mg): 3 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.145
Contributor: G.B. Kristjánsdóttir
Sample Notes: 27 *Melonis zaandamae*, 19 *Nonionellina labradorica,* 7*Globobulimina auriculata*, 16 *Nonionellina labradorica*, 2 *Robulus sp.*, 8 *Pullenia bulloides*, 5 *Cibicides lobatulus*, 4 *Stainforthia concava*, 4 *Nonion grateloupi*, 5 *Miliolids*, 1 *Cassidulina reniforme*, 1 *Triloculina sp.*
Stratigraphy: Top of soft, olive green Holocene marine mud.

Lab. ID: AAR - 4204 **GRL**-1355-S **Depth (cm):** 147.5-148.75
Age: 3,840 ± 35 **Corr. Age:** 3,440 ± 35 **Material:** Mollusc

Weight (mg): 17.5 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.24
Contributor: G.B. Kristjánsdóttir
Sample Notes: broken bivalves, δ^{18}O=3.79‰
Stratigraphy: In the soft, olive green Holocene marine mud.
Significance: To test the hypothesis that the sedimentation rate for the Holocene is constant.

Lab. ID: AAR - 4205 **GRL**-1356-S **Depth (cm):** 157.5-158.75
Age: 3,885 ± 35 **Corr. Age:** 3,485 ± 35 **Material:** Mollusc
Weight (mg): 18.2 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.86
Contributor: G.B. Kristjánsdóttir
Sample Notes: Broken bivalve, δ^{18}O =3.73‰
Stratigraphy: In the soft, olive green Holocene marine mud.
Significance: To test the hypothesis that the sedimentation rate for the Holocene is constant.

Lab. ID: AAR - 3886 **GRL**-1320-S **Depth (cm):** 219
Age: 6,440 ± 80 **Corr. Age:** 6,040 ± 80 **Material:** Foraminifera
Weight (mg): 5.8 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.2
Contributor: G.B. Kristjánsdóttir
Stratigraphy: Date from core catcher. In the transition zone, or possibly in the grey glacial marine mud.
Significance: This date is obtained from the core catcher. It is presumably near the base of the transition zone or within the glacial marine mud. In any case, a date of 6440±80 BP is too young when compared to radiocarbon dates from this interval in other cores from the area. Another sample from the base of the core was run to obtain a second basal date, and it is 8490±90 BP. Therefore, this date is discarded because it is most likely contaminated with younger material.

Lab. ID: AAR - 4478 **GRL**-1421-S **Depth (cm):** 225-226.25
Age: 8,490 ± 90 **Corr. Age:** 8,090 ± 90 **Material:** Foraminifera
Weight (mg): 5.6 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.48
Contributor: G.B. Kristjánsdóttir
Sample Notes: 40 *Globobulimina* + pieces
Stratigraphy: Base of core
Significance: Because of the young date (6440+-80 BP) obtained from the core catcher, another sample from the very base of the core was dated. It turned out to be older and therefore the younger date of 6440+-80 BP was discarded.

Core Summary: (GBK): Core B997-319PC2 contains one or possibly two lithofacies. Holocene mud and/or not glacial marine mud. The Holocene mud is soft, olive green with low mass magnetic susceptibilty and an average sedimentation rate of 36 cm/kyr.

Visually the base of the core looks like glacial marine mud, but some sedimentary analyses suggest that the transition zone extends to the base of the core (see further description of the transition zone in the description for core B997-317PC1). However, assuming a similar stratigraphy for this core, as in the nearby cores, the radiocarbon dates suggect that glacial marine mud is found at the base of the core. Vedde ash is found throughout the transition zone.

Core: B997-320 GGC1

Location: N Iceland Shelf, most landward site in Eyjafjardaráll
Lat.: 66˚ 19.890' **Long.:** -18˚ 39.710' **Depth (mwd):** -385

Lab. ID: AA - 29186 **GRL**-1371-S **Depth (cm):** 80
Age: 2,320 ± 65 **Corr. Age:** 1,920 ± 65 **Material:** Foraminifera
Weight (mg): 10.5 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -1.962
Contributor: G.B. Kristjánsdóttir
Sample Notes: 165 *Globobulimina auriculata*
Stratigraphy: Basal date, from core catcher, in Holocene marine mud.

Core Summary: See comment for AA-29185

Core: B997-320 PC

Location: N Iceland Shelf, most landward site in Eyjafjardaráll
Lat.: 66˚ 20.100' **Long.:** -18˚ 39.040' **Depth (mwd):** -388

Lab. ID: AA - 29185 **GRL**-1370-S **Depth (cm):** 327
Age: 3,880 ± 65 **Corr. Age:** 3,480 ± 65 **Material:** Foraminifera
Weight (mg): 13.8 **Genus:** *Globobulimina* **Species:** *auriculata*
δ^{13}**C:** Measured δ^{13}**C (‰):** -2.849
Contributor: G.B. Kristjánsdóttir
Sample Notes: 200 *Globobulimina auriculata*
Stratigraphy: Basal date, from core catcher. In marine mud.

Core Summary: (GBK): Core B997-320PC is being jointly studied with the University of Aarhus, Denmark. It has one lithologic unit, Holocene marine mud which is soft and olive green with low magnetic susceptibility and high carbonate content. Average sedimentation is 84.3 cm/ky.

Core: B997-321 PC

Location: N Iceland Shelf, most seaward site in Eyjafjardaráll
Lat.: 66˚ 53.470' **Long.:** -18˚ 58.470' **Depth (mwd):** -480

Lab. ID: AA - 29198 **GRL**-1395-S **Depth (cm):** 5.0-6.5
Age: 850 ± 85 **Corr. Age:** 450 ± 85 **Material:** Foraminifera
Weight (mg): 4.8 **Genus:** see below **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.463
Contributor: G.B. Kristjánsdóttir
Sample Notes: 47 *Islandiella norcossi*, 43 *Nonionellina labradorica*, 81 *Melonis zaandamae*, 16 *Cibicides lobatulus*, 17 *Globobulimina auriculata*, 15 *Pullenia bulloides*, 9 *Cassidulina teretis*, 5 *Nonion grateloupi*, 2 *Dentalina sp.*
Stratigraphy: Top of soft, olive green Holocene mud.

Lab. ID: AA - 27765 **GRL**-1367-S **Depth (cm):** 159.25-160.5
Age: 4,270 ± 70 **Corr. Age:** 3,870 ± 70 **Material:** Mollusc
Weight (mg): 42.3 **Genus:** **Species:**
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.756
Contributor: G.B. Kristjánsdóttir
Sample Notes: bivalve fragments
Stratigraphy: This date was obtained from within the Holocene mud.

Lab. ID: AA - 27766 **GRL**-1368-S **Depth (cm):** 279.25-280.5
Age: 5,645 ± 70 **Corr. Age:** 5,245 ± 70 **Material:** Mollusc
Weight (mg): 12.4 **Genus:** *Dentalium* **Species:** *sp.*
δ^{13}**C:** Measured δ^{13}**C (‰):** 1.366
Contributor: G.B. Kristjánsdóttir
Sample Notes: Scaphopod
Stratigraphy: This date is within the Holocene mud.

Lab. ID: CAMS - 44872 **GRL**-1365-S **Depth (cm):** 294.5
Age: 7,540 ± 40 **Corr. Age:** 7,140 ± 40 **Material:** Mollusc
Weight (mg): 11.2 **Genus:** *Dentalium* **Species:** *sp.*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.1
Contributor: G.B. Kristjánsdóttir
Sample Notes: Scaphopod
Stratigraphy: Basal date, from core catcher, in soft olive green Holocene marine mud.

Core Summary: (GBK): B997-321 is the northern most station in the Eyjafjardarall area. Core B997-321PC contains one lithological unit, Holocene marine mud which is soft and olive green, with low magnetic susceptibility and high carbon content. It has a slightly higher sand fraction than the other cores in the area which contain Holocene mud. This might be due to a different current regime and/or the fact that the station is located on the troughs western slope rather than in the middle like the others stations. The basal date of 7.540+/-40BP is the oldest date for the Holocene mud in the area. It points to a possible hiatus between the two lithofacies in other cores.

ICELAND PLATEAU

Core: V27-46

Location: N. of Iceland, Iceland Plateau
Lat.: 67˚ 35.2’ **Long.:** -11˚ 31.2’ **Depth (mwd):** -1728

Lab. ID: AA - 18393 **GRL**-1194-S **Depth (cm):** 38-39
Age: 12,115 ± 135 **Corr. Age:** 11,715 ± 135 **Material:** Foraminifera
Weight (mg): 11 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.28
Contributor: J.T. Andrews
Sample Notes: 1200 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date is from foraminiferal sandy clay, immediately below an ash layer containing dark (orange) volcanic bubble wall shards.
Significance: Constrains age of overlying ash layer; tentatively identified as Vedde Ash; provides initial chronostratigraphic control for the core.

Lab. ID: AA - 18394 **GRL**-1195-S **Depth (cm):** 326-328
Age: >44,000 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 14.7 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.27
Contributor: J.T. Andrews
Sample Notes: 1200 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date is from relatively homogenous unit of foram-rich sandy clay; coarse fraction ~ 10%.
Significance: Constrains the (relatively slow) sedimentation rate in this core.

Core Summary: (DCB): Three ash layers are observed in this core; the lower two (at 550 and 275 cm), consist of light-colored volcanic ash and glass, with 70-90% coarse fraction material. The upper ash (at ~30 cm) is darker volcanic glass, with abundant planktonic forams and a coarse fraction of 30-40 %. The date of 11,715 yrs BP (res. corrected by 400 yrs) at 38.5 cm (AA-18393), indicates that this upper ash may be the Vedde Ash, which was deposited during the Younger Dryas Chronozone. In any case, the dates indicate that this piston core contains at most only a very short (<20 cm) Holocene unit, and a relatively slowly deposited glacial unit (>44 ka date at 327 cm).

Core: V28-18

Location: N. of Iceland, Iceland Plateau
Lat.: 68˚ 47’ **Long.:** -20˚ 46’ **Depth (mwd):** -1326

Lab. ID: AA - 18395 **GRL**-1196-S **Depth (cm):** 454-456
Age: 36,380 ± 890 **Corr. Age:** 35,980 ± 890 **Material:** Foraminifera
Weight (mg): 7.6 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Assumed δ^{13}**C (‰):** 0
Contributor: Andrews/Barber
Sample Notes: 1100 *Neogloboquadrina pachyderma* (s.)

Stratigraphy: Date is from volcanic sandy clay; coarse fraction 15-30%.
Significance: Constrains sedimentation rates in the this core.

Core Summary: (DCB): This core consists primarily of relatively slowly deposited volcanic sandy clay (coarse fractions 10 - 30%). Foraminiferal abundance varies from barren to common, but tended towards rare (thus dating was problematic). Two intervals of finer-grained volcanic clay (coarse fraction < 5%) occur from 15-25 cm and from 630-700 cm. Numerous "sharp color changes" from olive-gray (5Y 4/1) to yellowish-brown (10 YR 4/2) were noted at ~15-30 cm intervals during logging of the freshly split core.

Core: V28-19

Location: NE of Iceland, Iceland Plateau
Lat.: 68˚ 13’ **Long.:** -15˚ 16’ **Depth (mwd):** -1374

Lab. ID: AA - 18396 **GRL**-1197-S **Depth (cm):** 236-238
Age: >49,130 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 7.8 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.60
Sample Notes: 1200 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date is from foram marl ooze (biogenic coarse fraction ~ 30%), immediately overlying brown (10YR 3/2) clay (coarse frac. ~3%).
Significance: The indicative meaning of this date is unclear. It is possible that the dated forams were reworked, and are much older than the enclosing material. Alternatively, the sedimentation rate at this site is very low.

Core Summary: (DCB): The uppermost portion of the core (0 - 20 cm) consists of brown (10YR 3/2) clay (coarse frac. ~3%). Below that (20 - 35 cm) is volcanic sandy clay (coarse frac. ~15%). A foram marl ooze (biogenic coarse fraction ~ 30%) is found at 235 cm, and immediately overlies a brown (10YR 3/2) clay layer (coarse frac. ~3%); the latter extends down to 250 cm. An ash layer (coarse frac. 25 - 95% including forams) occupies 388 - 403 cm. The remainder of core is sandy clay (coarse frac. 5 - 10%); color ranges from olive-gray (5Y 3/1) to yellowish-brown (10 YR 4/2). Due to the too old age described above, no further investigation of this core was made.

Core: V30-130

Location: NE of Iceland Iceland Plateau
Lat.: 67˚ 30.5’ **Long.:** -15˚ 04.5’ **Depth (mwd):** -858

Lab. ID: AA - 18397 **GRL**-1198-S **Depth (cm):** 114-115
Age: 21,245 ± 180 **Corr. Age:** 20,845 ± 180 **Material:** Foraminifera
Weight (mg): 7.3 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** -0.08
Contributor: Andrews/Barber

Sample Notes: 800 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date is from relatively homogenous, massive, yellowish-brown hemipelagic sandy clay.
Significance: Constrains sedimentation rate in this core.

Lab. ID: AA - 18398 **GRL**-1199-S **Depth (cm):** 645-646
Age: 38,670 ± 1030 **Corr. Age:** 38,270 ± 1030 **Material:** Foraminifera
Weight (mg): 11.3 **Genus:** *Neogloboquadrina* **Species:** *pachyderma* (s.)
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.10
Contributor: Andrews/Barber
Sample Notes: 800 *Neogloboquadrina pachyderma* (s.)
Stratigraphy: Date is from relatively homogenous, massive, yellowish-brown hemipelagic sandy clay.
Significance: Constrains sedimentation rates in this core.

Core Summary: (DCB): Both dates are from yellow-brown hemipelagic sandy clay (10YR 4/2; coarse fraction ~10%). At 90 cm there is a distinct transition in the core; above this boundary lies olive-gray clay (5Y 3/2; coarse fraction <5%). Two separate ash layers occur in this upper unit at 35 & 45 cm; coarse fraction in the ash is ~85%. One of these ash layers could conceivably be the Vedde Ash. The Holocene sedimentation rate at this site is probably less than 5 cm/kyr. In the apparent glacial portion of the core, below 90 cm, two volcanic sandy clay layers are found, at 410 and 530 cm (both are brown-black, w/ coarse fractions of ~25%.

ICELAND LAKES

Core: REK 6-3

Location: Lake at Rekavik bak Latrar in Northwest Iceland, core site mid-lake, in deepest basin.
Lat.: 66˚ 25.0’ **Long.:** -23˚ 2.5’ **Depth (mwd):** -20

Lab. ID: CAMS - 32670 **GRL**-1285-S **Depth (cm):** 90-91
Age: 1980 ± 70 **Corr. Age:** 1580 ± 70 **Material:** Mollusc
Weight (mg): 142 **Genus:** *Macoma* **Species:** *calcaria*
δ^{13}**C:** Measured δ^{13}**C (‰):** 0.0
Contributor: Lisa Doner
Sample Notes: Articulated, intact bivalve

Stratigraphy: Part of sequence of marine/lacustrine transitions.
Significance: In upper meter of 4.0 m long piston core. Occurs in marine sediments located at bottom of modern lake.
Core Summary: Sedimentation rate approx. = 0.046 cm/yr in upper meter of core.

Core: REK 6-6

Location: Lake at Rekavik bak Latrar in Northwest Iceland, core site mid-lake, in deepest basin.

Lat.: 66˚ 25.0’	**Long.:** -23˚ 2.5’	**Depth (mwd):** -20
Lab. ID: CAMS - 32669	**GRL**-1284-S	**Depth (cm):** 385-385.5
Age: 5440 ± 80	**Corr. Age:** 5040 ± 80	**Material:** Mollusc
Weight (mg): 880	**Genus:** *Macoma*	**Species:** *calcaria*
δ^{13}**C:** Measured	δ^{13}**C (‰):** 0.0	

Contributor: Lisa Doner
Sample Notes: Articulated, intact bivalve

Stratigraphy: Part of sequence of marine/lacustrine transitions.
Significance: Near bottom of 4.0 m long piston core. Occurs in marine sediments located at bottom of modern lake. Lake faces onto the open NW Icelandic Shelf.
Core Summary: Sedimentation rate approx. = 0.085 cm/yr between 90-385 cm depth.

EXPOSURE NEAR LYONS, COLORADO

Location: Exposure near Lyons, Colorado

Lat.: 40˚ 14.757'	**Long.:** -105˚ 17.34’	**Elevation (m):** 5300
Lab. ID: AA - 24831	**GRL**-1300-S	**Outcrop height (m):** ca. 4
Age: 7060 ± 80	**Corr. Age:**	**Material:** Mollusc
Weight (mg): 12.8	**Genus:**	**Species:**
δ^{13}**C:** Measured	δ^{13}**C (‰):** -0.65	

Sample Notes: Small gastropods from base of the colluvium and above river gravels
Significance: Shells date the base of the fan deposits. Site is on the north side of the road that leads from Lyons to Estes Park and consists of fan and debris flows over Pinedale outwash clast supported gravels. Large mammal bones have been found in close stratigraphic (vertical) proximity.

Stratigraphy: shells provide a minimum age for the river gravels which extend about 2 m (not measured) above the present flood plain.

REFERENCES

Aksu, A.E., 1981. Late Quaternary stratigraphy, paleoenvironmentology, and sedimentation history of Baffin Bay and Davis Strait. Unpublished PhD, 771 pp thesis, Dalhousie University, Halifax, N.S.

Aksu, A.E., and Mudie, P.J., 1985. Late Quaternary stratigraphy and paleoecology of Northwest Labrador Sea. Marine Micropaleontology, 9: 537-557.

Andrews, J.T., 1993: Changes in the Silt- and Clay-Size Mineralogy of Sediments at ODP Site 645B, Baffin Bay. Canadian Journal of Earth Sciences, 30: 2448-2452.

Andrews, J.T., 1976, Radiocarbon Date List III: Baffin Island, N.W.T., Canada: Institute of Arctic and Alpine Research Occasional Paper 21, 47 p.

Andrews, J.T., 1975, Radiocarbon date list II from Cumberland Peninsula, Baffin Island, N.W.T., Canada: Arctic and Alpine Research, v. 7, p. 77-91.

Andrews, J.T., Caseldine, C., Weiner, N.J., and Hatton, J., subm. Changes in Marine and Terrestrial Neoglacial (~4 ka) Environments in Reykjarfjordur, N. Iceland: Climate and/or Settlement? Journal Quaternary Sciences.

Andrews, J.T., Hardardóttir, J., Helgadóttir, G., Jennings, A.E., Geirsdóttir, A., Sveinbjörnsdóttir, A., Schoolfield, S., Kristjánsdóttir, G.B., Smith, L.M., Thors, K., and Syvitski1, J.P.M., in press. The N and W Iceland Shelf: Insight into LGM Ice Extent and Deglaciation based on Acoustic Stratigraphy and Basal Radiocarbon AMS dates. Quaternary Science Reviews.

Andrews, J.T., Domack, E.W., Cunningham, W.L., Leventer, A., Licht, K.J., Jull, A.J.T., DeMasters, D.J., Jennings, A.E., 1999. Problems and Possible Solutions Concerning Radiocarbon Dating of Surface Marine Sediments, Ross Sea, Antarctica. Quaternary Research, v 52, p. 206-216.

Andrews, J.T., Keigwin, L., Hall, F., and Jennings, A.E., 1999. Abrupt deglaciation events and Holocene palaeoceanography from high-resolution cores, Cartwright Saddle, Labrador Shelf, Canada. Jour. Quat. Sci. v. 14, pg. 383-397.

Andrews, J. T., and Helgadóttir, G., 1999. Late Quaternary Glacial and Marine Environments off North Iceland: Where was the LGM? Abstract volume, Geological Society of America, 31(7): A314.

Andrews, J.T., Kirby, M.E., Aksu, A.E., Barber, D.C., and Meese, D., 1998a. Late Quaternary Detrital Carbonate (DC-) events in Baffin Bay (67° - 74° N): Do they correlate with and contribute to Heinrich Events in the North Atlantic? Quaternary Science Reviews, 17: 1125-1137.

Andrews, J.T., Kirby, M.E., Jennings, A.E., and Barber, D.C., 1998b. Late Quaternary stratigraphy, chronology, and depositional processes on the SE Baffin Island slope, Detrital Carbonate and Heinrich events: Implications for onshore glacial history. Geographie physique et Quaternaire, 52: 91-105.

Andrews, J.T., Cooper, T.A., Jennings, A.E., Stein, A.B., Erlenkeuser, H., 1998c. Late Quaternary iceberg-rafted detritus events on the Denmark Strait/Southeast Greenland continental slope (~65° N): Related to North Atlantic Heinrich Events? Marine Geology, v 149, p 211-228.

Andrews, J.T., Smith, L.M., Preston, R., Cooper, T., and Jennings, A.E., 1997: Spatial and temporal patterns of iceberg rafting (IRD) along the East Greenland margin, ca. 68 N, over the last 14 cal.ka. Journal of Quaternary Science, 12: 1-13.

Andrews, J.T., Jennings, A.E., Cooper, T., Williams, K.M., and Mienert, J., 1996. Late Quaternary sedimentation along a fjord to shelf (trough) transect, East Greenland (ca. 68°N). In: Andrews, J. T., Austin, W., Bergsten, H., and Jennings, A. E. (eds.), Late Quaternary Paleoceanography of North Atlantic Margins. London: Geological Society of London, 153-166.

Andrews, J.T., and Short, S.K., 1983, Radiocarbon Date List V: Baffin Island, N.W.T., Canada, and Radiocarbon Date List II: Labrador and Northern Quebec, Canada: Institute of Arctic and Alpine Research Occasional Paper 40, 71 p.

Andrews, J.T., Laymon, C.A., and Briggs, W.M., 1989, Radiocarbon Date List III: Labrador and Northern Quebec, Canada, and Radiocarbon Date List VI: Baffin Island, N.W.T., Canada: Institute of Arctic and Alpine Research Occasional Paper 46, 85 p.

Andrews, J.T., and Miller, G.H., 1972, The Quaternary history of northern Cumberland Peninsula, east Baffin Island, N.W.T., Part X: Radiocarbon date list: Arctic and Alpine Research, v. 4, p. 261-277.

Andrews, J.T., and Drapier, L., 1967, Radiocarbon dates obtained through Geographical Branch Field observations: Geographical Bulletin, v. 9, p. 115-162.

Asprey, K.W., Syvitski, J.P.M., Andrews, J.T., and Dowdeswell, J.A., 1993, CANAM-PONAM Cruise HU93030: West Iceland to East Greenland.

Bendle, J.A.P., 1999. A Holocene record from the Icelandic Shelf. Unpublished MSc thesis, University of London, London. 57 pp.

Berkman, P.A., and Forman, S.L., 1996. Pre-bomb radiocarbon and the reservoir correction for calcareous marine species in the Southern Ocean. Geophysical Research Letters, 23(4): 363-366.
Cartee-Schoolfield, S., in prep. Late Quaternary sediment history north and south of the Denmark Strait sill. MSc Thesis, University of Colorado, Boulder.
Cunningham, W. L., Leventer, A., Andrews, J. T., Jennings, A. E. and Licht, K.J. 1999. Late Pleistocene-Holocene marine conditions in the Ross Sea, Antarctica: evidence from the diatom record. The Holocene, v.9, no.2, p.129-139.
Cunningham, W.L., and Leventer, A., 1998. Diatom assemblages in surface sediments of the Ross Sea: relationship to present oceanographic conditions. Antarctic Science, v.10, p.134-146.
Cunningham, W.L., 1997. The use of modern and fossil diatom assemblages as climate proxies in the Central and Western Ross Sea, Antarctica. MSc thesis, University Colorado, Boulder, 233 pp.
DeMaster, D.J., Rageuneau, O., and Nittrouer, C.A., 1996. Preservation efficiencies and accumulation rates for biogenic silica and organic C, N and P in high-latitude sediments: the Ross Sea. Journal of Geophysical Research, v.101, C8, p.18,501-18,518.
Domack, E.W., Jacobsen, E.A., Shipp, S.S., and Anderson, J.B., 1999. Sedimentologic and stratigraphic signature of the Late Pleistocene/Holocene fluctuation of the West Antarctic Ice Sheet in the Ross Sea: A new perspective, Part 2. Geological Society of America Bulletin, v.111, p.1517-1536.
Eastman, K., and Andrews, J.T., 1997. Changes in inshore marine and glacial conditions over the last 3,000 years, East Greenland (68˚N), based on high resolution marine sediment cores. Abstract Geological Society of America, 29(6): A38.
Gordon, J.E., and Harkness, D.D., 1992. Magnitude and geographic variation of the radiocarbon content in Antarctic marine life: Implications for reservoir corrections in radiocarbon dating. Quaternary Science Reviews, 11: 697-708.
Hagen, S. 1999. North Atlantic paleoceanography and climate history during the last *c.* 70 cal. ka years. Doctor Scientiarum thesis, Dept. of Geology, University of Tromsø, Norway, 110 pp.
Hall, F.R., Andrews, J.T., Jennings, A.E., Vilks, G., and Moran, K. 1999. Late Quaternary sediments and chronology of the northeast Labrador Shelf (Karlsefni Trough, Saglek Bank): Links to Glacial History. Geological Society of America Bulletin, 111: 1700-1713.
Hansen, K.V., 1998. Holocene foraminifera stratigraphy and climatic fluctuations in the Denmark Strait, East Greenland. Thesis in Micropaleontology, Dept of Mar Geo, University of Aarhus, 85 pp.
Helgadóttir, G., 1984. Senkvartaere Foraminifer og Sedimenter i Faxafloi-Jokuldjupomradet Vest for Island. Unpublished PhD thesis, Univeristy of Oslo, pp. 116 (plus appendixes).
Helgadóttir, G., 1997. Paleoclimate (0 to >14 ka) of W. and NW Iceland: An Iceland/ USA Contribution to P.A.L.E., Cruise Report B9-97. Marine Research Institute of Iceland.
Hjort, C., 1973, A sea correction for East Greenland: Goelogiska Föreningens i Stockholm Förhandlingar, v. 95, p. 132-134.
James, E. B., 1999. Sediment analysis in Reykjafjardarall Trough, Northern Iceland. Unpublished BA Honors thesis, University of Colorado, Boulder. 33 pp plus appendixes.
James, E.B., and Andrews, J.T., 1999. Sediment characteristics and chronology of glacial marine and marine sediments, North Iceland. Abstract Geological Society of America, 31(7): A74.
Jennings, A.E., Syvitski, J.P.M., Gerson, L., Grönvald, K., Geirsdóttir, A., Hardardóttir, J., Andrews, J. T., and Hagen, S., in press. Chronology and paleoenvironments during the late Weichselian deglaciation of the SW Iceland Shelf, Boreas.
Jennings, A.E., Andrews, J.T., Syvitski, J.P.M., Hardardóttir, J., and Schoolfield, S., 1998. Glacial ice extent and deglaciation history of the western and northern parts of the Iceland Shelf. Abstracts Geological Society of America Annual Meeting, (30)7, p. A112.
Jennings, A.E., Manley, W.F., MacLean, B., Andrews, J.T., 1998. Marine evidence for the last glacial advance across Eastern Hudson Strait, Eastern Canadian Arctic. Journal of Quaternary Science, v 13 (6), p. 501-514.
Jennings, A.E., Smith, L.M., Andrews, J.T., Syvitski, J.P.M., Hald, M., and Weiner, N.J., 1998. Evidence for glacial ice extent and deglaciation history in Kangerlussuaq Trough, East Greenland Shelf. The 28th International Arctic Workshop, Program with Abstracts, March 12-14, 1998, INSTAAR, Univ. of Colorado, p. 82-83.
Jennings, A.E., and Weiner, N.J., 1996. Environmental change om eastern Greenland during the last 1300 years: Evidence from Foraminifera and Lithofacies in Nansen Fjord, 68°N. The Holocene, 6: 179-191.
Kaufman, D. S., and Williams, K. M., 1992. Radiocarbon Date List VII: Baffin Island, N.W.T., Canada. Institute of Arctic and Alpine Research, Occasional Paper 48, University of Colorado, Boulder, 82 pp.

Kellogg, T.B., Hughes, T. and Kellogg, D.E., 1996. Late Pleistocene interactions of East and West Antarctic ice-flow regimes: evidence from the McMurdo ice shelf. Journal of Glaciology, v.42, no. 142, p.486-500.

Kirby, M.E., 1996. Mid-to-Late Wisconsin ice sheet/ocean interactions in the northwest Labrador Sea: sedimentology, provenance, process, and chronology. Unpublished MSc thesis, University of Colorado, Boulder, 194 pp.

Licht, K.J., 1999. Investigations into the Late Quaternary history of the Ross Sea, Antarctica. Ph.D. dissertation, University of colorado, 216p.

MacAyeal, D.R., 1993. Binge/purge oscillations of the Laurentide Ice Sheet as a cause of North Atlantic's Heinrich events. Paleoceanography, v. 8, p. 775-784.

Mangerud, J., and Gulliksen, S., 1975, Apparent radiocarbon ages of recent marine shells from Norway, Spitsbergen, and Arctic Canada: Quaternary Research, v. 5, p. 263-273.

Manley, W.F., and Jennings, A.E., 1996. Radiocarbon Date List VIII: Eastern Canadian Arctic, Labrador, Northern Quebec, East Greenland Shelf, Iceland Shelf, and Antarctica. INSTAAR, Occasional Paper 50, University of Colorado, Boulder, 163 pp.

Miller, G.H., 1979, Radiocarbon Date List IV: Baffin Island, N.W.T., Canada: Institute of Arctic and Alpine Research Occasional Paper 29, 61 p.

Preston, R., 1996. Analysis of sediment cores from the East Greenland Shelf. Unpublished BA Honors thesis, University of Colorado, Boulder, 81 pp.

Smith, L. M., 1997. Late Quaternary glacial marine sedimentation in the Kangerlussuaq Region, East Greenland, 68° N. Unpublished MSc thesis, University of Colorado, Boulder, 190 pp.

Smith, L.M., Andrews, J.T., Jennings, A.E., Gronvald, K., 1999. Holocene Paleoceanography of the Southwest and North Iceland Continental Shelf. Abstract volume, Geological Society of America, v 31 (7), p. A314.

Smith, L.M., Jennings, A.E., Andrews, J.T., and Syvitski, J.P.M., 1998. Glacial ice extent and deglaciation history in Kangerlussuaq Trough, East Greenland Shelf. Abstracts Geological Society of America Annual Meeting, (30)7, p. A111.

Smith, L.M., Jennings, A.E., Hardardóttir, J., 1996. Late Quaternary environmental changes on the NW Iceland continental shelf. Abstract, GSA Annual Meeting Abstracts with Programs, vol. 28, 7, p. A-426.

Stein, A. B., 1996. Seismic stratigraphy and seafloor morphology of the Kangerlugssuaq Region, East Greenland: Evidence for Glaciations to the Continental shelf break during the Late Weischelian and earlier. Unpublished MSc thesis, University of Colorado, Boulder, 293 pp.

Syvitski, J. P., Jennings, A. E., and Andrews, J. T., 1999. High-Resolution Seismic Evidence for Multiple Glaciation across the Southwest Iceland Shelf. Arctic and Alpine Research, 31: 50-57.

Syvitski, J. P. M., Andrews, J. T., and Dowdeswell, J. A., 1996. Sediment deposition in an iceberg-dominated Glacimarine Environment, East Greenland: Basin Fill Implications. Global and Planetary Change, 12: 251-270.

Thors, K., 1974. I. Sediments of the Vestfirdir Shelf, NW Iceland, and II. Geology of the Ulfarsfell Area, SW Iceland. Unpublished PhD, 167 pp. thesis, University of Manchester.

Thors, K., and Helgadottir, G., 1999. Seismic reflection profiles from Isafjardardup, Jokulfirdir, and Dupall, NW Iceland. Abstract Geological Society of America, 31(7): A74.

Williams, K. M., Andrews, J. T., and Weiner, N. J., 1995. Late Quaternary Paleoceanography of the Mid- to Outer Continental Shelf, East Greenland. Arctic and Alpine Research, 27(4): 352-363.

Vilks, G., and Powell, C., 1987. Cruise Report and Preliminary Results CSS HUDSON 87-033, Sept. 18-Oct. 7, 1987. Bedford Institute of Oceanography.

Veldhuyzen, H. 1981. Sources and transport of late Quaternary sediments, Karlsefni Trough, Labrador Shelf. MSc thesis, McGill University, Montreal, 247 pp.

Appendix 1A. Abbreviated date list, indexed by laboratory number.

Lab No.	GRL	Reported Age	Corr.Age	core name	location
AA - 18382	1183-S	20,780 ± 260	20,330	HU87033-009PC	Davis Strait
AA - 18383	1184-S	15,125 ± 155	14,675	IMP 76-2-1PC	NW Labrador Sea
AA - 18384	1185-S	11,595 ± 95	11,145	HU77021-063PC	Labrador Shelf
AA - 18386	1187-S	17,931 ± 210	17,481	HU77029-017PC	Baffin Bay
AA - 18387	1188-S	>42,000 ±		HU76029-033PC	Baffin Bay
AA - 18388	1189-S	12,370 ± 105	11,920	HU76029-034PC	Baffin Bay
AA - 18389	1190-S	>40,000 ±		HU76029-034PC	Baffin Bay
AA - 18390	1191-S	>44,000 ±		HU76029-036PC	Baffin Bay
AA - 18391	1192-S	12,680 ± 125	12,230	HU74026-557PC	Baffin Bay
AA - 18392	1193-S	11,028 ± 98	10,578	HU87033-015PC	Labrador shelf
AA - 18393	1194-S	12,115 ± 135	11,715	V27-46	Iceland Plateau
AA - 18394	1195-S	>44,000 ±		V27-46	Iceland Plateau
AA - 18395	1196-S	36,380 ± 890	35,980	V28-18	N. of Iceland
AA - 18396	1197-S	>49,130 ±		V28-19	NE of Iceland
AA - 18397	1198-S	21,245 ± 180	20,845	V30-130	NE of Iceland
AA - 18398	1199-S	38,670 ± 1030	38,270	V30-130	NE of Iceland
AA - 18399	1200-S	16,450 ± 135	15,900	HU93030-028	Kangerlussuaq Fjord
AA - 18400	1201-S	>34,000 ±		NBP9501-39KC	western Ross Sea
AA - 18794	1202-S	1,465 ± 65	915	HU93030-013 TWC	Kangerlussuaq Trough
AA - 19900	1205-S	16,055 ± 125	14,855	NBP9501-53PC	western Ross Sea
AA - 19901	1206-S	20,895 ± 250	19,695	NBP9501-53PC	western Ross Sea
AA - 19902	1207-S	14,810 ± 160	13,610	NBP9501-54	western Ross Sea
AA - 19903	1208-S	4950 ± 100	3750	NBP9501-54	western Ross Sea
AA - 19904	1209-S	5790 ± 80	4590	NBP9501-52	western Ross Sea
AA - 19905	1210-S	6250 ± 60	5050	NBP9501-52	western Ross Sea
AA - 19906	1211-S	3935 ± 110	2735	NBP9401-4	western Ross Sea
AA - 19907	1212-S	3335 ± 100	2135	NBP9401-4	western Ross Sea
AA - 19908	1213-S	10855 ± 125	9655	IWSOE68 32 PH	Weddell Sea
AA - 19909	1214-S	29770 ± 470		IWSOE 68 52 PH	Weddell Sea
AA - 19910	1215-S	25900 ± 620		IWSOE 68 52 PH	Weddell Sea
AA - 19911	1216-S	32500 ± 1420		IWSOE 68 52 PH	Weddell Sea
AA - 19912	1217-S	8,545 ± 170	7,995	BS1191-K3	Kangerlussuaq Trough
AA - 19913	1218-S	7,240 ± 140	6,690	BS1191-K5	Kangerlussuaq Trough
AA - 19914	1219-S	8,400 ± 230	7,850	BS1191-K15	Nansen Trough
AA - 19915	1220-S	11,830 ± 125	11,430	HU93030-006 LCF	Jokuldjup
AA - 19916	1221-S	>39,000 ±		HU93030-013 TWC	Kangerlussuaq Trough
AA - 19917	1222-S	10,240 ± 90	9,840	A9-92-456	Djupall
AA - 19918	1223-S	13,024 ± 120	12,474	PO175/1-5-1	Kangerlussuaq Trough
AA - 19919	940-O	8880 ± 75		NBP9401-22PC	western Ross Sea
AA - 19920	941-O	9435 ± 75		NBP9401-22PC	western Ross Sea
AA - 19921	942-O	9615 ± 75		NBP9401-22PC	western Ross Sea
AA - 19922	951-O	8855 ± 95	5650	NBP9501-34KC	western Ross Sea
AA - 19923	953-O	36800 ± 900		NBP9501-34KC	western Ross Sea
AA - 19924	956-O	26585 ± 280	23445	NBP9501-39KC	western Ross Sea
AA - 19925	957-O	25750 ± 320	22610	NBP9501-39KC	western Ross Sea
AA - 19926	958-O	29400 ± 1200		NBP9501-42PC	western Ross Sea
AA - 20192	1225-S	9,745 ± 85	9,345	A882-32	Jokuldjup
AA - 20193	1226-S	10,410 ± 150	10,010	A882-33	Jokuldjup
AA - 20194	1227-S	10,990 ± 190	10,590	A882-33	Jokuldjup
AA - 20725	1234-S	13250 ± 280	12800	ODP Leg 105 Site 645C 001 H01	Baffin Bay
AA - 20726	1235-S	>41470 ±		ODP Leg 105 Site 645C 001 H02	Baffin Bay
AA - 20727	1236-S	>44,060 ±		ODP Leg 105 Site 645C 001 H03	Baffin Bay
AA - 20728	1237-S	26525 ± 360	26075	HU75009-IV-058PC	Davis Strait
AA - 20729	1238-S	29990 ± 405	29540	HU75009-IV-058PC	Davis Strait
AA - 20730	1239-S	31040 ± 1820	30590	HU75009-IV-058PC	Davis Strait
AA - 20731	1240-S	5210 ± 510	4760	HU92028-158PC	Hatton Basin
AA - 20732	1241-S	11,730 ± 305	11,330	HU93030-006 LCF	Iceland Shelf
AA - 20733	1242-S	12,130 ± 290	11,730	HU93030-006 LCF	Iceland Shelf
AA - 20734	1243-S	12,410 ± 165	12,010	HU93030-006 LCF	Iceland Shelf
AA - 20735	1244-S	12,690 ± 195	12,290	HU93030-006 LCF	Iceland Shelf
AA - 20736	1245-S	12,810 ± 205	12,410	HU93030-006 LCF	Iceland Shelf
AA - 20737	1246-S	18,085 ± 325	16,885	NBP9501-42PC	western Ross Sea
AA - 20738	943-O	4350 ± 75		NBP9501-30KC	western Ross Sea
AA - 20739	944-O	3025 ± 55		NBP9501-30KC	western Ross Sea
AA - 20740	945-O	5080 ± 60		NBP9501-30KC	western Ross Sea
AA - 20741	946-O	8010 ± 90		NBP9501-30KC	western Ross Sea

Appendix 1A. Continued.

Lab No.	GRL	Reported Age	Corr.Age	core name	location
AA - 20742	947-O	9855 ± 100		NBP9501-30KC	western Ross Sea
AA - 20743	948-O	26265 ± 325	23840	NBP9501-31KC	western Ross Sea
AA - 20744	949-O	31605 ± 520	29180	NBP9501-31KC	western Ross Sea
AA - 20745	950-O	3205 ± 60	0	NBP9501-34KC	western Ross Sea
AA - 20746	952-O	13330 ± 95		NBP9501-34KC	western Ross Sea
AA - 20747	954-O	17800 ± 175	15025	NBP9501-37KC	western Ross Sea
AA - 20748	955-O	26895 ± 375	24120	NBP9501-37KC	western Ross Sea
AA - 20788	1182-S	19,290 ± 180	18,840	HU87033-009	NW Labrador Sea
AA - 20789	1247-S	12,555 ± 750	12,105	HU87003-004	Scotian shelf
AA - 20790	1248-S	11795 ± 85	11345	HU87003-004	Scotian shelf
AA - 20791	1249-S	20,465 ± 350	19,265	NBP9501-39KC	western Ross Sea
AA - 21742	1265-S	460 ± 90	preBomb	HU87033-017TWC	Cartwright Saddle
AA - 21743	1266-S	2,030 ± 55	1,580	HU87033-017TWC	Cartwright Saddle
AA - 21744	1267-S	765 ± 55	315	HU87033-017LCF	Cartwright Saddle
AA - 21745	1268-S	6,185 ± 55	5,735	HU87033-017LCF	Cartwright Saddle
AA - 21746	1269-S	650 ± 65	preBomb	HU87033-018TWC	Cartwright Saddle
AA - 21747	1270-S	2,815 ± 75	2,365	HU87033-018TWC	Cartwright Saddle
AA - 21748	1271-S	860 ± 65	410	HU87033-018LCF	Cartwright Saddle
AA - 21749	1272-S	5,685 ± 70	5,235	HU87033-018LCF	Cartwright Saddle
AA - 21750	1273-S	10,300 ± 300	9,850	HU87033-019PC	Newfoundland shelf
AA - 21751	1274-S	31,710 ± 1900	31,260	HU76029-025	Baffin Bay
AA - 21752	1275-S	18180 ± 190	16980	NBP9501-42PC	western Ross Sea
AA - 21753	1277-S	2,820 ± 45	2,420	A9-92-455	Djupall
AA - 21754	963-O	13450 ± 90		NBP9401-22TC	western Ross Sea
AA - 21755	964-O	13365 ± 90		NBP9401-22TC	western Ross Sea
AA - 21756	965-O	14550 ± 95		NBP9401-22PC	western Ross Sea
AA - 21757	966-O	29100 ± 400		NBP9401-22PC	western Ross Sea
AA - 21758	967-O	32680 ± 660		NBP9401-22PC	western Ross Sea
AA - 21759	968-O	4360 ± 50	0	NBP9401-33PC	central Ross Sea
AA - 21760	970-O	33465 ± 570	29105	NBP9401-33PC	central Ross Sea
AA - 21761	971-O	13830 ± 90		NBP9401-36TC	central Ross Sea
AA - 21762	973-O	30510 ± 415		NBP9401-36TC	central Ross Sea
AA - 21763	974-O	26955 ± 340		NBP9401-36PC	central Ross Sea
AA - 21764	976-O	3085 ± 45		NBP9501-42TC	western Ross Sea
AA - 21765	977-O	5230 ± 50		NBP9501-42TC	western Ross Sea
AA - 21766	980-O	3940 ± 45	1515	NBP9501-31KC	western Ross Sea
AA - 21767	981-O	5925 ± 60	3500	NBP9501-31KC	western Ross Sea
AA - 21768	982-O	7270 ± 65	4845	NBP9501-31KC	western Ross Sea
AA - 21769	984-0	30695 ± 460	27920	NBP9501-37KC	western Ross Sea
AA - 21770	985-O	5820 ± 90	2680	NBP9501-39KC	western Ross Sea
AA - 21771	986-O	8980 ± 70	5840	NBP9501-39KC	western Ross Sea
AA - 23218	1286-S	6,210 ± 55	5,660	JM96-1207/1-GC	Nansen Shelf Trough
AA - 23219	1287-S	3,050 ± 80	2,500	JM96-1210/1-GC	Nansen Fjord
AA - 23220	1288-S	10,625 ± 90	10,175	JM96-1216/2-GC	Kangerlussuaq Trough
AA - 23221	1289-S	14,550 ± 150	14,100	JM96-1216/2-GC	Kangerlussuaq Trough
AA - 23222	1290-S	14970 ± 140	13770	NBP9501-7PC	central Ross Sea
AA - 23223	969-O	39,305 ± 1155		NBP9401-33PC	central Ross Sea
AA - 23224	972-O	28055 ± 315		NBP9401-36TC	central Ross Sea
AA - 23225	975-O	30,220 ± 420		NBP9401-36PC	central Ross Sea
AA - 23226	978-O	23,940 ± 225		NBP9501-42PC	western Ross Sea
AA - 23227	979-O	12,600 ± 80		NBP9501-53PC	western Ross Sea
AA - 23228	983-0	19385 ± 135	16610	NBP9501-37KC	western Ross Sea
AA - 23405	987-O	22,970 ± 210		NBP9501-7PC	central Ross Sea
AA - 23406	988-O	25,690 ± 300		NBP9501-7PC	central Ross Sea
AA - 23407	989-O	20,780 ± 220		NBP9501-7PC	central Ross Sea
AA - 23408	990-O	6640 ± 110		NBP9501-11PC	central Ross Sea
AA - 23409	991-O	27,120 ± 300		NBP9501-11PC	central Ross Sea
AA - 23410	992-O	21,840 ± 230		NBP9501-17PC	central Ross Sea
AA - 23411	993-O	17760 ± 120	14025	NBP9501-18PC	central Ross Sea
AA - 23412	994-O	27580 ± 320	23845	NBP9501-18PC	central Ross Sea
AA - 23413	995-O	25870 ± 250	22135	NBP9501-18PC	central Ross Sea
AA - 23414	996-O	24090 ± 205		NBP9501-24PC	central Ross Sea
AA - 23415	997-O	31310 ± 480		NBP9501-24PC	central Ross Sea
AA - 23416	998-O	30640 ± 440		NBP9501-24PC	central Ross Sea
AA - 23417	1298-S	17,590 ± 190	16,390	NBP9501-7PC	central Ross Sea
AA - 23418	1299-S	21,980 ± 290	20,780	NBP9501-7PC	central Ross Sea
AA - 24831	1300-S	7060 ± 80			Lyons, Colorado

Appendix 1A. Continued.

Lab No.	GRL	Reported Age	Corr.Age	core name	location
AA - 24832	1309-S	15,475 ± 95	15,025	P189AR-P45	Slope Beaufort Sea
AA - 24833	1310-S	9680 ± 65	9230	P189AR-P45	Slope Beaufort Sea
AA - 24834	1311-S	11,240 ± 140	10,790	P189AR-P45	Slope Beaufort Sea
AA - 24835	1312-S	9,220 ± 75	8,670	JM96-1205/2-GC	Northern shelf trough
AA - 24836	1313-S	1,105 ± 65	555	JM96-1214/2-GC	Kangerlussuaq Trough
AA - 24837	1314-S	2,630 ± 75	2,080	JM96-1215/2-GC	Kangerlussuaq Trough
AA - 24838	1315-S	3,295 ± 70	2,845	JM96-1216/2-GC	Kangerlussuaq Trough
AA - 24839	1316-S	1,575 ± 45	1,025	JM96-1207/1-GC	Nansen Shelf Trough
AA - 24840	1317-S	8,250 ± 60	7,700	JM96-1207/1-GC	Nansen Shelf Trough
AA - 24841	1318-S	26,570 ± 490		IWSOE68 37 PH	Weddell Sea
AA - 24962	1204-S	>49,900 ±		IWSOE68 32 PH	Weddell Sea
AA - 25274	999-O				

Appendix 1B. Index of radiocarbon dates arranged by location, core, and sample depth.

GRL	Lab No.	Core Name	Depth (cm)	Rep. Age ± SD
Antarctica				
968-O	AA - 21759	NBP9401-33PC	1-3	4360 ± 50
1020-O	AA - 26520	NBP9401-33PC	28-30	26040 ± 260
1021-O	AA - 26521	NBP9401-33PC	35.5-37.5	23900 ± 210
1022-O	AA - 26522	NBP9401-33PC	67-69	26300 ± 270
1023-O	AA - 26523	NBP9401-33PC	114-116	30310 ± 460
969-O	AA - 23223	NBP9401-33PC	135-138	39,305 ± 1155
970-O	AA - 21760	NBP9401-33PC	163-165	33465 ± 570
971-O	AA - 21761	NBP9401-36TC	9-11	13830 ± 90
972-O	AA - 23224	NBP9401-36TC	33-35	28055 ± 315
973-O	AA - 21762	NBP9401-36TC	49-51	30510 ± 415
974-O	AA - 21763	NBP9401-36PC	6-8	26955 ± 340
975-O	AA - 23225	NBP9401-36PC	88-90	30,220 ± 420
1024-O	AA - 26524	NBP9501-6PC	20-22	28660 ± 350
1025-O	AA - 26525	NBP9501-6PC	72-74	27250 ± 290
987-O	AA - 23405	NBP9501-7PC	2-4	22,970 ± 210
1299-S	AA - 23418	NBP9501-7PC	2-4	21,980 ± 290
988-O	AA - 23406	NBP9501-7PC	20-22	25,690 ± 300
1298-S	AA - 23417	NBP9501-7PC	20-22	17,590 ± 190
989-O	AA - 23407	NBP9501-7PC	63-66	20,780 ± 220
1290-S	AA - 23222	NBP9501-7PC	63-66	14970 ± 140
990-O	AA - 23408	NBP9501-11PC	3-5	6640 ± 110
991-O	AA - 23409	NBP9501-11PC	61-63	27,120 ± 300
992-O	AA - 23410	NBP9501-17PC	2-4	21,840 ± 230
1026-O	AA - 27801	NBP9501-18TC	0-2	3735 ± 60
1027-O	AA - 27802	NBP9501-18TC	26-28	20490 ± 260
1028-O	AA - 27803	NBP9501-18TC	62-64	24680 ± 490
993-O	AA - 23411	NBP9501-18PC	10-12	17760 ± 120
994-O	AA - 23412	NBP9501-18PC	21.5-23.5	27580 ± 320
995-O	AA - 23413	NBP9501-18PC	41-43	25870 ± 250
996-O	AA - 23414	NBP9501-24PC	4-6	24090 ± 205
997-O	AA - 23415	NBP9501-24PC	55-58	31310 ± 480
998-O	AA - 23416	NBP9501-24PC	105-107	30640 ± 440
1017-O	AA - 25283	NBP9606-38	surface	3580 ± 50
1319-S	AA - 25284	NBP9606-38	surface	1065 ± 45
1010-O	AA - 25280	NBP9606-91	surface	3580 ± 50
1011-O	AA - 25281	NBP9606-91	surface	3345 ± 50
1012-O	AA - 25282	NBP9606-91	surface	3825 ± 50
1461-S	AA - 32955	DF87-14	140-142	40,500 ± 1500
1511-S	AA - 33408	E32-12	0-2	35,900 ± 740
1470-S	AA - 32956	E32-43	100-102	25050 ± 240
1333-S	AA - 26516	E32-43	142-144	36500 ± 940
1497-S	AA - 32969	E32-43	160-162	35,970 ± 790
1512-S	AA - 33409	E32-44	325-327	>41,200 ±
1513-S	AA - 33410	E32-44	445-447	>40,600 ±
1212-S	AA - 19907	NBP9401-4	surface	3335 ± 100
1211-S	AA - 19906	NBP9401-4	surface	3935 ± 110
963-O	AA - 21754	NBP9401-22TC	15-17	13450 ± 90
964-O	AA - 21755	NBP9401-22TC	73-75	13365 ± 90
940-O	AA - 19919	NBP9401-22PC	2-4	8880 ± 75
941-O	AA - 19920	NBP9401-22PC	42-43.5	9435 ± 75
942-O	AA - 19921	NBP9401-22PC	83-85	9615 ± 75
965-O	AA - 21756	NBP9401-22PC	108-110	14550 ± 95
966-O	AA - 21757	NBP9401-22PC	190-192	29100 ± 400
967-O	AA - 21758	NBP9401-22PC	256-258	32680 ± 660
1404-S	AA - 29207	NBP9501-29	247	4050 ± 110
1405-S	AA - 29208	NBP9501-29	538	4900 ± 65
943-O	AA - 20738	NBP9501-30KC	0-2	4350 ± 75
944-O	AA - 20739	NBP9501-30KC	5-7	3025 ± 55
945-O	AA - 20740	NBP9501-30KC	18-20	5080 ± 60
946-O	AA - 20741	NBP9501-30KC	29-31	8010 ± 90
947-O	AA - 20742	NBP9501-30KC	34-36	9855 ± 100
980-O	AA - 21766	NBP9501-31KC	30-32	3940 ± 45
981-O	AA - 21767	NBP9501-31KC	70-72	5925 ± 60
982-O	AA - 21768	NBP9501-31KC	87-89	7270 ± 65
948-O	AA - 20743	NBP9501-31KC	167-169	26265 ± 325
949-O	AA - 20744	NBP9501-31KC	200	31605 ± 520
950-O	AA - 20745	NBP9501-34KC	0-1	3205 ± 60
1403-S	AA - 29206	NBP9501-34KC	13	1005 ± 55
951-O	AA - 19922	NBP9501-34KC	13-14	8855 ± 95
952-O	AA - 20746	NBP9501-34KC	132	13330 ± 95
953-O	AA - 19923	NBP9501-34KC	229	36800 ± 900
954-O	AA - 20747	NBP9501-37KC	83-84	17800 ± 175
983-0	AA - 23228	NBP9501-37KC	93-95	19385 ± 135
984-0	AA - 21769	NBP9501-37KC	125-127	30695 ± 460
955-O	AA - 20748	NBP9501-37KC	146-148	26895 ± 375
985-O	AA - 21770	NBP9501-39KC	80-82	5820 ± 90
999-O	AA - 25274	NBP9501-39KC	98-100	6565 ± 60
1000-O	AA - 25275	NBP9501-39KC	98-100	6520 ± 55
1001-O	AA - 25276	NBP9501-39KC	98-100	6665 ± 55
986-O	AA - 21771	NBP9501-39KC	170-172	8980 ± 70
1250-S	CAMS - 27576	NBP9501-39KC	217-222	17,090 ± 150
956-O	AA - 19924	NBP9501-39KC	230	26585 ± 280
1249-S	AA - 20791	NBP9501-39KC	245-247	20,465 ± 350
957-O	AA - 19925	NBP9501-39KC	249-250	25750 ± 320
1251-S	CAMS - 27577	NBP9501-39KC	249-252	20,320 ± 110
1201-S	AA - 18400	NBP9501-39KC	257	>34,000 ±
976-O	AA - 21764	NBP9501-42TC	20-22	3085 ± 45
977-O	AA - 21765	NBP9501-42TC	68-70	5230 ± 50
978-O	AA - 23226	NBP9501-42PC	142-144	23,940 ± 225
958-O	AA - 19926	NBP9501-42PC	146-148	29400 ± 1200
1246-S	AA - 20737	NBP9501-42PC	190-192	18,085 ± 325
1275-S	AA - 21752	NBP9501-42PC	258-260	18180 ± 190
1210-S	AA - 19905	NBP9501-52	surface	6250 ± 60
1209-S	AA - 19904	NBP9501-52	surface	5790 ± 80
1205-S	AA - 19900	NBP9501-53PC	15-16	16,055 ± 125
979-O	AA - 23227	NBP9501-53PC	17-19	12,600 ± 80
1206-S	AA - 19901	NBP9501-53PC	320-321	20,895 ± 250
1208-S	AA - 19903	NBP9501-54	surface	4950 ± 100
1207-S	AA - 19902	NBP9501-54	surface	14,810 ± 160
1002-O	AA - 25277	NBP9606-15	surface	2755 ± 45
1003-O	AA - 25278	NBP9606-15	surface	2925 ± 45
1005-O	AA - 25279	NBP9606-15	surface	2805 ± 50
1347-S	AA - 27755	G18	100-105	11840 ± 200
1214-S	AA - 19909	IWSOE 68 52 PH	7-12	29770 ± 470
1215-S	AA - 19910	IWSOE 68 52 PH	42-47	25900 ± 620
1216-S	AA - 19911	IWSOE 68 52 PH	80	32500 ± 1420
1213-S	AA - 19908	IWSOE68 32 PH	5-10	10855 ± 125
1204-S	AA - 24962	IWSOE68 32 PH	60	>49,900 ±
1318-S	AA - 24841	IWSOE68 37 PH	56-60	26,570 ± 490
1345-S	CAMS - 44867	IWSOE70 2-19-1 PC	30-35	16190 ± 70
1346-S	CAMS - 44868	IWSOE70 2-19-1 PC	350-355	11270 ± 60
1348-S	AA - 27756	IWSOE70 3-7-1 PC	200	26660 ± 490
1349-S	AA - 27757	IWSOE70 3-7-1 PC	400	13640 ± 130
1343-S	CAMS - 44865	IWSOE70 3-17-1 PC	203-208	14940 ± 70
1344-S	CAMS - 44866	IWSOE70, 3-17-1	400-405	23870 ± 160
Arctic Ocean				
1337-S	AA - 27751	P189AR-P45	6-7	7920 ± 110
1309-S	AA - 24832	P189AR-P45	7-10	15,475 ± 95
1339-S	AA - 27752	P189AR-P45	15-20	7485 ± 150
1340-S	AA - 27753	P189AR-P45	163-164	8545 ± 160
1342-S	AA - 27754	P189AR-P45	225-226	9125 ± 185
1310-S	AA - 24833	P189AR-P45	285-288	9680 ± 65
1311-S	AA - 24834	P189AR-P45	485-488	11,240 ± 140
Eastern Canada				
1192-S	AA - 18391	HU74026-557PC	174	12,680 ± 125
1274-S	AA - 21751	HU76029-025	199-202	31,710 ± 1900
1188-S	AA - 18387	HU76029-033PC	380	>42,000 ±
1189-S	AA - 18388	HU76029-034PC	36.5	12,370 ± 105
1190-S	AA - 18389	HU76029-034PC	411.5	>40,000 ±
1191-S	AA - 18390	HU76029-036PC	316.5	>44,000 ±
1187-S	AA - 18386	HU77029-017PC	902	17,931 ± 210
1234-S	AA - 20725	ODP Leg 105 Site 645C 001 H01	92-95	13250 ± 280
1235-S	AA - 20726	ODP Leg 105 Site 645C 001 H02	72-75	>41470 ±
1236-S	AA - 20727	ODP Leg 105 Site 645C 001 H03	119-122	>44,060 ±
1183-S	AA - 18382	HU87033-009PC	650-652	20,780 ± 260
1237-S	AA - 20728	HU75009-IV-058PC	50-51	26525 ± 360
1238-S	AA - 20729	HU75009-IV-058PC	310-311	29990 ± 405
1239-S	AA - 20730	HU75009-IV-058PC	400-401	31040 ± 1820
1264-S	CAMS - 28664	HU93034-002PC	380-399	10,030 ± 80
1240-S	AA - 20731	HU92028-158PC	8-10	5210 ± 510
1458-S	AA - 31260	HU97048-007PC	207-211	14660 ± 120
1350-S	AA - 27758	HU97048-007PC	279-283	17624 ± 160
1469-S	AA - 31269	HU97048-007PC	351-356	21370 ± 270
1351-S	AA - 27759	HU97048-007PC	715-718	35290 ± 880
1184-S	AA - 18383	IMP 76-2-1PC	162	15,125 ± 155
1182-S	AA - 20788	HU87033-009	600-602	19,290 ± 180
1265-S	AA - 21742	HU87033-017TWC	0-5	460 ± 90
1266-S	AA - 21743	HU87033-017TWC	100-102	2,030 ± 55
1267-S	AA - 21744	HU87033-017LCF	0-2	765 ± 55
1268-S	AA - 21745	HU87033-017LCF	250-252	6,185 ± 55
1269-S	AA - 21746	HU87033-018TWC	0-2	650 ± 65
1270-S	AA - 21747	HU87033-018TWC	100-103	2,815 ± 75
1271-S	AA - 21748	HU87033-018LCF	4-5	860 ± 65
1272-S	AA - 21749	HU87033-018LCF	250-251	5,685 ± 70
1334-S	AA - 26517	HU87033-018LCF	1316	12,535 ± 140
1185-S	AA - 18384	HU77021-063PC	830-846	11,595 ± 95
1193-S	AA - 18392	HU87033-015PC	480-509	11,028 ± 98
1273-S	AA - 21750	HU87033-019PC	503-505	10,300 ± 300
1247-S	AA - 20789	HU87003-004	375-377	12,555 ± 750
1248-S	AA - 20790	HU87003-004	450-452	11795 ± 85

Appendix 1B. Continued.

GRL	Lab No.	Core Name	Depth (cm)	Rep. Age ± SD
Denmark Strait				
1471-S	AA - 31270	JM96-1228/1-GC	26-28	11,015 ± 85
1415-S	AA - 29218	JM96-1228/1-GC	94-96	12,355 ± 95
1416-S	AA - 29219	JM96-1228/1-GC	160-162	12,890 ± 90
1472-S	AA - 31271	JM96-1228/1-GC	232-234	19,790 ± 240
1473-S	AA - 31272	JM96-1228/1-GC	252-254	17,010 ± 130
1384-S	AA - 29187	JM96-1229/1-GC	27-29	10,910 ± 140
1385-S	AA - 29188	JM96-1229/1-GC	31-35	10,870 ± 140
1386-S	AA - 29189	JM96-1229/1-GC	65-67	11,520 ± 140
1387-S	AA - 29190	JM96-1229/1-GC	75-77	12,500 ± 120
1388-S	AA - 29191	JM96-1229/1-GC	109-111	12,845 ± 90
1445-S	AA - 31249	JM96-1229/1-GC	149-151	12,560 ± 85
1446-S	AA - 31250	JM96-1229/1-GC	205-207	24,290 ± 240
1326-S	CAMS - 44859	JM96-1229/1-GC	> 265	31,320 ± 380
1433-S	AA - 31237	JM96-1221/2-GC	0-2	8,120 ± 60
1435-S	AA - 31239	JM96-1221/2-GC	68-70	15,140 ± 110
1436-S	AA - 31240	JM96-1221/2-GC	114-116	17,230 ± 120
1437-S	AA - 31241	JM96-1221/2-GC	124-126	16,710 ± 110
1467-S	AA - 31268	JM96-1221/2-GC	158-160	19,750 ± 180
1325-S	CAMS - 44858	JM96-1221/2-GC	> 185	18,240 ± 80
1324-S	CAMS - 44857	JM96-1220/2-GC	187	18,090 ± 80
1438-S	AA - 31242	JM96-1222/1-GC	0-2	10,590 ± 70
1439-S	AA - 31243	JM96-1222/1-GC	36-38	13,735 ± 85
1291-S	AAR - 3517	JM96-1222/1-GC	> 68	15,690 ± 110
1411-S	AA - 29214	JM96-1225/1-GC	57-58	15,380 ± 130
1412-S	AA - 29215	JM96-1225/2-GC	160-162	25,530 ± 250
1413-S	AA - 29216	JM96-1225/2-GC	230-232	31,430 ± 530
1414-S	AA - 29217	JM96-1225/2-GC	320-322	40,200 ± 2600
1389-S	AA - 29192	JM96-1226/4-GC	4-6	9,590 ± 100
1440-S	AA - 31244	JM96-1226/4-GC	24-26	13,085 ± 85
1441-S	AA - 31245	JM96-1226/4-GC	54-56	15,520 ± 120
1442-S	AA - 31246	JM96-1226/4-GC	116-118	18,820 ± 160
1443-S	AA - 31247	JM96-1226/4-GC	144-146	21,410 ± 160
1390-S	AA - 29193	JM96-1226/4-GC	159-161	25,910 ± 350
1391-S	AA - 29194	JM96-1226/4-GC	191-193	26,400 ± 360
1292-S	AAR - 3518	JM96-1226/4-GC	>252	27,530 ± 300
East Greenland Fjords and Shelf				
1200-S	AA - 18399	HU93030-028	26-28	16,450 ± 135
1354-S	AA - 27762	JM96-1212/1-GC	20	5 ± 40
1336-S	AA - 26518	JM96-1210/1-GC	134-138	2,150 ± 40
1287-S	AA - 23219	JM96-1210/1-GC	332	3,050 ± 80
1217-S	AA - 19912	BS1191-K3	15-17	8,545 ± 170
1218-S	AA - 19913	BS1191-K5	100	7,240 ± 140
1221-S	AA - 19916	HU93030-013 TWC	8	>39,000 ±
1202-S	AA - 18794	HU93030-013 TWC	15-16	1,465 ± 65
1396-S	AA - 29199	JM96-1213/1-GC	68	10,520 ± 110
1397-S	AA - 29200	JM96-1213/1-GC	199	14,680 ± 170
1398-S	AA - 29201	JM96-1213/1-GC	319-321	12,630 ± 80
1399-S	AA - 29202	JM96-1213/1-GC	389-391	13,690 ± 230
1400-S	AA - 29203	JM96-1213/1-GC	439-441	13,356 ± 108
1401-S	AA - 29204	JM96-1213/1-GC	473-475	13,830 ± 270
1313-S	AA - 24836	JM96-1214/2-GC	0-2	1,105 ± 65
1447-S	AA - 31251	JM96-1214/2-GC	48-50	7,265 ± 70
1448-S	AA - 31252	JM96-1214/2-GC	118-120	9,290 ± 80
1459-S	AA - 31261	JM96-1214/2-GC	178-180	11,210 ± 330
1460-S	AA - 31262	JM96-1214/2-GC	354-356	16,210 ± 170
1519-S	NSRL - 10786	JM96-1214/2-GC	468-470	12,700 ± 110
1402-S	AA - 29205	JM96-1214/2-GC	560-564	11,380 ± 80
1314-S	AA - 24837	JM96-1215/2-GC	5-7	2,630 ± 75
1450-S	AA - 31747	JM96-1215/2-GC	44-46	6180 ± 170
1451-S	AA - 31254	JM96-1215/2-GC	148-150	9,005 ± 70
1452-S	AA - 31255	JM96-1215/2-GC	248-250	9,890 ± 65
1453-S	AA - 31256	JM96-1215/2-GC	308-310	10,720 ± 70
1457-S	AA - 32954	JM96-1215/2-GC	354-356	10,480 ± 85
1454-S	AA - 31257	JM96-1215/2-GC	402-404	10,480 ± 260
1455-S	AA - 31258	JM96-1215/2-GC	458-460	11,870 ± 110
1456-S	AA - 31259	JM96-1215/2-GC	494-496	12,260 ± 100
1278-S	CAMS - 32045	JM96-1215/2-GC	>587	12,900 ± 50
1409-S	AA - 29212	JM96-1216/1-GC	160-162	8,635 ± 80
1410-S	AA - 29213	JM96-1216/1-GC	301-303	12,460 ± 75
1315-S	AA - 24838	JM96-1216/2-GC	0-2	3,295 ± 70
1476-S	AA - 31751	JM96-1216/2-GC	54-56	8180 ± 80
1477-S	AA - 31752	JM96-1216/2-GC	94-96	9580 ± 100
1478-S	AA - 31753	JM96-1216/2-GC	164-166	10,940 ± 130
1288-S	AA - 23220	JM96-1216/2-GC	210-212	10,625 ± 90
1279-S	CAMS - 32046	JM96-1216/2-GC	246	12,040 ± 80
1289-S	AA - 23221	JM96-1216/2-GC	>246	14,550 ± 150
1223-S	AA - 19918	PO175/1-5-1	125	13,024 ± 120
1203-S	CAMS - 23553	BS1191-K15	73-76	3930 ± 60
1219-S	AA - 19914	BS1191-K15	140-142	8,400 ± 230
1406-S	AA - 29209	JM96-1205/2-GC	318-320	7,630 ± 190
1366-S	AA - 27764	JM96-1205/2-GC	408-410	8,845 ± 60
1312-S	AA - 24835	JM96-1205/2-GC	507	9,220 ± 75
1316-S	AA - 24839	JM96-1207/1-GC	12-14	1,575 ± 45
1286-S	AA - 23218	JM96-1207/1-GC	125-126	6,210 ± 55
1317-S	AA - 24840	JM96-1207/1-GC	160-162	8,250 ± 60
1280-S	CAMS - 32047	JM96-1207/1-GC	324	9,800 ± 60
Iceland shelf				
1225-S	AA - 20192	A882-32	72-78	9,745 ± 85
1226-S	AA - 20193	A882-33	117-130	10,410 ± 150
1227-S	AA - 20194	A882-33	145-155	10,990 ± 190
1498-S	AA - 32970	B997-347 PC1	2-4	770 ± 65
1499-S	AA - 32971	B997-347 PC1	100-102	5,705 ± 65
1500-S	AA - 32972	B997-347 PC1	220-222	9,695 ± 95
1501-S	AA - 32973	B997-347 PC1	340-342	10,460 ± 120
1502-S	AA - 32974	B997-347 PC1	424-426	10,950 ± 140
1327-S	CAMS - 44860	B997-347 PC1	480	10,730 ± 100
1328-S	CAMS - 44861	B997-348PC	491	12,280 ± 50
1408-S	AA - 29211	B997-350PC	>430	10,745 ± 75
1233-S	AA - 27262	HU93030-006 LCF	252	10,430 ± 60
1241-S	AA - 20732	HU93030-006 LCF	278	11,730 ± 305
1242-S	AA - 20733	HU93030-006 LCF	470	12,130 ± 290
1220-S	AA - 19915	HU93030-006 LCF	622	11,830 ± 125
1243-S	AA - 20734	HU93030-006 LCF	955	12,410 ± 165
1244-S	AA - 20735	HU93030-006 LCF	1175	12,690 ± 195
1245-S	AA - 20736	HU93030-006 LCF	1235	12,810 ± 205
1444-S	AA - 31248	JM96-1227/2-GC	0-2	9,560 ± 65
1323-S	CAMS - 42012	JM96-1227/2-GC	56	36,050 ± 560
1353-S	AA - 27761	B997-343GGC	154	3,985 ± 50
1277-S	AA - 21753	A9-92-455	63.5-65.5	2,820 ± 45
1276-S	CAMS - 29871	A9-92-456	20.5-21.5	5,660 ± 60
1301-S	AAR - 3706	A9-92-456	34.5	10,570 ± 110
1302-S	AAR - 3707	A9-92-456	148-151.5	12,250 ± 120
1222-S	AA - 19917	A9-92-456	153-155	10,240 ± 90
1380-S	CAMS - 46528	B997-314SGC	16.5-19.5	2,980 ± 50
1381-S	CAMS - 46529	B997-314SGC	16.5-19.5	1,200 ± 50
1482-S	NSRL - 10677	B997-314GGC	17-18	1,120 ± 40
1483-S	NSRL - 10678	B997-314GGC	53-54	4,670 ± 40
1484-S	NSRL - 10679	B997-314GGC	87-88	7,140 ± 65
1462-S	AA - 31263	B997-335PC	0-2	1,800 ± 200
1392-S	AA - 29195	B997-335PC	168-171	9,490 ± 70
1352-S	AA - 27760	B997-335PC	427.5	10,350 ± 80
1463-S	AA - 31264	B997-336PC3	0-2	1,965 ± 60
1464-S	AA - 31265	B997-336PC3	0-2	2,875 ± 95
1465-S	AA - 31266	B997-336PC3	142-143	9,240 ± 200
1466-S	AA - 31267	B997-336PC3	378-380	10,705 ± 80
1514-S	NSRL - 10776	B997-336PC3	454	10,860 ± 160
1495-S	AA - 32967	B997-336PC3	484-486	13,385 ± 90
1329-S	CAMS - 42013	B997-336PC3	501	13,680 ± 70
1532-S	AA - 34406	B997-338PC	19-23	11,560 ± 170
1533-S	AA - 34407	B997-338PC	98-101	19,280 ± 420
1534-S	AA - 34408	B997-338PC	318-321	31,900 ± 1,700
1496-S	AA - 32968	B997-338PC	412	34,600 ± 640
1303-S	AAR - 3708	JM96-1232/1-GC	0-2	2,805 ± 60
1304-S	AAR - 3709	JM96-1232/1-GC	100-102	5,590 ± 65
1305-S	AAR - 3710	JM96-1232/1-GC	198-200	8,360 ± 80
1293-S	AAR - 3515	JM96-1232/1-GC	279	9,060 ± 70
1376-S	CAMS - 46524	JM96-1234/1-GC	0-2	2,060 ± 50
1377-S	CAMS - 46525	JM96-1234/1-GC	54-56	13,460 ± 70
1378-S	CAMS - 46526	JM96-1234/1-GC	158-160	14,530 ± 90
1379-S	CAMS - 46527	JM96-1234/1-GC	258-260	15,720 ± 70
1425-S	CAMS - 50405	JM96-1234/1-GC	348-350	14,030 ± 70
1294-S	AAR - 3516	JM96-1234/1-GC	>360	11,450 ± 130
1430-S	AA - 31234	B997-339PC2	0-1.25	1,450 ± 65
1431-S	AA - 31235	B997-339PC2	131.5-132.75	8,415 ± 65
1432-S	AA - 31236	B997-339PC2	358.75-360	9,815 ± 70
1335-S	AA - 26518	B997-339PC2	527	10,450 ± 85
1479-S	NSRL - 10674	B997-312GGC	29-31	7,640 ± 45
1480-S	NSRL - 10675	B997-312GGC	122-123	8,920 ± 80
1481-S	NSRL - 10676	B997-312GGC	199-203	9,080 ± 50
1330-S	CAMS - 44862	B997-311PC	328	9,140 ± 50
1407-S	AA - 29210	B997-341PC3	220	2,980 ± 55
1468-S	AA - 31748	B997-342PC	440	9,270 ± 80
1382-S	CAMS - 46530	B997-324 SGC	18-20	1,970 ± 60
1503-S	AA - 32975	B997-324 PC1	2-4	475 ± 65
1515-S	AA - 33631	B997-324 PC1	94-96	4,500 ± 80
1516-S	AA - 33632	B997-324 PC1	114-116	6,290 ± 100
1508-S	AA - 33011	B997-324 PC1	150-152	9,650 ± 110
1509-S	AA - 33012	B997-324 PC1	190-192	10,090 ± 120
1510-S	AA - 33013	B997-324 PC1	248-252	10,580 ± 95
1362-S	CAMS - 44869	B997-325PC	271	9,430 ± 50
1322-S	AAR - 3888	B997-324 PC1	> 283	9,720 ± 110
1494-S	AA - 32966	B997-326PC1	10-12	3,690 ± 70
1527-S	AA - 34401	B997-326PC1	16-21	9,040 ± 110
1528-S	AA - 34402	B997-326PC1	108-114	9,580 ± 100
1529-S	AA - 34403	B997-326PC1	196-200	23,570 ± 340

Appendix 1B. Continued.

GRL	Lab No.	Core Name	Depth (cm)	Rep. Age ± SD
1530-S	AA - 34404	B997-326PC2	0-1	280 ± 60
1518-S	NSRL - 10785	B997-326PC2	50	1,970 ± 60
1531-S	AA - 34405	B997-326PC2	74-76	6,810 ± 80
1520-S	AA - 33842	B997-326PC2	153-155	13,155 ± 95
1363-S	CAMS - 44870	B997-327PC	329.5	4,560 ± 50
1485-S	AA - 32957	B997-322PC2	8-10	1,900 ± 60
1486-S	AA - 32958	B997-322PC2	18-20	3,810 ± 70
1487-S	AA - 32959	B997-322PC2	38-40	11,970 ± 130
1488-S	AA - 32960	B997-322PC2	76-80	9,120 ± 130
1489-S	AA - 32961	B997-322PC2	136-140	>37,800 ±
1321-S	AAR - 3887	B997-322PC2	162	42,600 ± 3050
1517-S	AA - 33633	B997-323PC	37-38.25	8,520 ± 110
1526-S	AA - 34400	B997-323PC	58-60	13,100 ± 130
1491-S	AA - 32963	B997-323PC	70-71.25	13,440 ± 190
1492-S	AA - 32964	B997-323PC	88.75-91.25	>25,900 ±
1493-S	AA - 32965	B997-323PC	238.75-241.25	>30,500 ±
1361-S	AA - 27763	B997-323PC	292	25,330 ± 640
1364-S	CAMS - 44871	B997-332PC	530	10,370 ± 60
1426-S	NSRL - 10182	B997-328PC	3.75-5	175 ± 65
1427-S	NSRL - 10673	B997-328PC	35-36.25	550 ± 35
1506-S	NSRL - 10680	B997-328PC	73.75-76.25	800 ± 40
1372-S	CAMS - 46520	B997-328PC	108-110	1,460 ± 50
1373-S	CAMS - 46521	B997-328PC	125	1,230 ± 50
1374-S	CAMS - 46522	B997-328PC	168-169	1,970 ± 50
1375-S	CAMS - 46523	B997-328PC	257-259	2,660 ± 50
1507-S	NSRL - 10681	B997-328PC	288.75-291.25	2,990 ± 35
1428-S	NSRL - 10183	B997-328PC	300-301.25	2,620 ± 45
1429-S	NSRL - 10184	B997-328PC	350-351.25	3,660 ± 55
1331-S	CAMS - 44863	B997-328PC	422	4,680 ± 50
1383-S	CAMS - 46531	B997-330SGC	19-20	610 ± 60
1332-S	CAMS - 44864	B997-330PC	540	9,420 ± 60
1393-S	AA - 29196	B997-317PC1	1.25-2.5	290 ± 65
1418-S	AAR - 4475	B997-317PC1	58.75-61.25	1,525 ± 45
1419-S	AAR - 4476	B997-317PC1	140-141.25	3,520 ± 90
1420-S	AAR - 4477	B997-317PC1	161.25-163.75	10,130 ± 140
1360-S	AAR - 4209	B997-317PC1	245	12,270 ± 100
1394-S	AA - 29197	B997-319GGC	0-1.25	725 ± 85
1422-S	AAR - 4479	B997-319GGC	48.75-50	2,130 ± 75
1357-S	AAR - 4206	B997-319GGC	65-66.25	4,145 ± 50
1358-S	AAR - 4207	B997-319GGC	66.25-67.5	3,950 ± 45
1359-S	AAR - 4208	B997-319GGC	73.75-75	7,170 ± 70
1423-S	AAR - 4480	B997-319GGC	75-76.25	8,200 ± 90
1424-S	AAR - 4481	B997-319GGC	114-116.5	11,980 ± 140
1369-S	AA - 29184	B997-319GGC	173	12,100 ± 110
1417-S	AA - 29220	B997-319PC2	5.75-8.25	565 ± 75
1355-S	AAR - 4204	B997-319PC2	147.5-148.75	3,840 ± 35
1356-S	AAR - 4205	B997-319PC2	157.5-158.75	3,885 ± 35
1320-S	AAR - 3886	B997-319PC2	219	6,440 ± 80
1421-S	AAR - 4478	B997-319PC2	225-226.25	8,490 ± 90
1371-S	AA - 29186	B997-320GGC1	80	2,320 ± 65
1370-S	AA - 29185	B997-320PC	327	3,880 ± 65
1395-S	AA - 29198	B997-321PC	5.0-6.5	850 ± 85
1367-S	AA - 27765	B997-321PC	159.25-160.5	4,270 ± 70
1368-S	AA - 27766	B997-321PC	279.25-280.5	5,645 ± 70
1365-S	CAMS - 44872	B997-321PC	294.5	7,540 ± 40
Iceland Plateau				
1194-S	AA - 18393	V27-46	38-39	12,115 ± 135
1195-S	AA - 18394	V27-46	326-328	>44,000 ±
1196-S	AA - 18395	V28-18	454-456	36,380 ± 890
1197-S	AA - 18396	V28-19	236-238	>49,130 ±
1198-S	AA - 18397	V30-130	114-115	21,245 ± 180
1199-S	AA - 18398	V30-130	645-646	38,670 ± 1030
Iceland Lakes				
1285-S	CAMS - 32670	REK 6-3	90-91	1980 ± 70
1284-S	CAMS - 32669	REK 6-6	385-385.5	5440 ± 80
Colorado				
1300-S	AA - 24831		ca. 4	7060 ± 80

Appendix 2A. Comprehensive list of dates included in this and previous INSTAAR Radiocarbon Date Lists, arranged by laboratory number, 1967-1999.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
AA-190	12,890 ± 290	<125 µm org	VI	AA-3464	9,620 ± 90	Foraminifera	VI	AA-5837	10,315 ± 85	Mollusc	VII
AA-191	8,425 ± 375	Mollusc	VI	AA-3465	9,870 ± 160	Foraminifera	VI	AA-5838	10,505 ± 85	Mollusc	VII
AA-244A	9,085 ± 290	Mollusc	VI	AA-3473	11,725 ± 125	Foraminifera	VI	AA-5839	10,510 ± 90	Mollusc	VII
AA-263	>27,000	Foraminifera	VI	AA-3473	11,725 ± 125	Foraminifera	VII	AA-5840	10,680 ± 85	Mollusc	VII
AA-264	10,490 ± 450	Mollusc	VI	AA-3481	8,390 ± 80	Foraminifera	VII	AA-5841	10,570 ± 85	Mollusc	VII
AA-347	Modern	Mollusc	VI	AA-3494	8,485 ± 60	Organic Conc	VII	AA-5987	9,380 ± 80	Foraminifera	VII
AA-348	12,190 ± 430	<125 µm org	VI	AA-3495	7,410 ± 60	Organic Conc	VII	AA-5988	3,010 ± 50	Foraminifera	VII
AA-412	9,450 ± 360	Mollusc	VI	AA-3583A	10,600 ± 75	Mollusc	VII	AA-5989	10,375 ± 75	Foraminifera	VII
AA-413	7,790 ± 230	Mollusc	VI	AA-3583B	10,625 ± 170	Mollusc	VII	AA-5990	8,615 ± 75	Foraminifera	VII
AA-650	4,540 ± 300	<125 µm org	VI	AA-3584	10,930 ± 85	Mollusc	VII	AA-5992	14,455 ± 110	Foraminifera	VII
AA-651	10,250 ± 390	<125 µm org	VI	AA-3585,6	10,010 ± 110	Mixed	VII	AA-5994	12,425 ± 125	Foraminifera	VII
AA-652	10,410 ± 380	<125 µm org	VI	AA-3678	9,010 ± 100	Foraminifera	VII	AA-5995	12,675 ± 100	Foraminifera	VII
AA-653	16,700 ± 900	<125 µm org	VI	AA-3746	11,020 ± 120	Foraminifera	VII	AA-5996	10,870 ± 90	Foraminifera	VII
AA-654	19,200 ± 1100	<125 µm org	VI	AA-3783	3,600 ± 75	Organic Conc	VII	AA-5997	12,740 ± 100	Foraminifera	VII
AA-655A,B	11,060 ± 300	Mollusc	VI	AA-3784	11,555 ± 85	Foraminifera	VII	AA-5998	4,440 ± 70	Foraminifera	VII
AA-712	5,600 ± 330	Mollusc	VI	AA-3809	Lost	Mollusc	VII	AA-5999	15,010 ± 105	Foraminifera	VII
AA-886	10,010 ± 360	Mollusc	VI	AA-3810	11,315 ± 75	Foraminifera	VII	AA-6000	11,100 ± 85	Foraminifera	VII
AA-935	13,500 ± 700	<125 µm org	VI	AA-3814	8,075 ± 145	Plant Macros	VII	AA-6001	11,120 ± 90	Foraminifera	VII
AA-936	2,145 ± 80	<125 µm org	VI	AA-3815	8,320 ± 95	Plant Macros	VII	AA-6026	1,045 ± 55	Humic Acids	VII
AA-1004	7,577 ± 137	<125 µm org	VI	AA-3818	4,650 ± 60	Organic Conc	VII	AA-6027	3,015 ± 55	Humic Acids	VII
AA-1005	3,428 ± 70	<125 µm org	VI	AA-3819	10,980 ± 70	Organic Conc	VII	AA-6028	5,675 ± 95	Humic Acids	VII
AA-1011	2,819 ± 103	<125 µm org	VI	AA-3850	7,425 ± 60	Foraminifera	VII	AA-6029	6,160 ± 90	Humic Acids	VII
AA-1012	12,970 ± 225	<125 µm org	VI	AA-3890	2,370 ± 70	Foraminifera	VII	AA-6298	35,685 ± 805	Mollusc	VII
AA-1181	7,230 ± 90	Mollusc	VI	AA-3939	10,920 ± 250	Foraminifera	VII	AA-6299	8,365 ± 75	Mollusc	VII
AA-1272	Lost	Mollusc	VI	AA-3940	10,705 ± 70	Foraminifera	VII	AA-6300	11,590 ± 180	Mollusc	VII
AA-1273	20,650 ± 260	<125 µm org	VI	AA-3941	8,720 ± 70	Mollusc	VII	AA-6301	9,460 ± 95	Mollusc	VII
AA-1507	7,020 ± 80	<125 µm org	VI	AA-3974	7,790 ± 65	Plant Macros	VII	AA-6302	9,350 ± 75	Mollusc	VII
AA-1508	4,060 ± 90	<125 µm org	VI	AA-3975	9,655 ± 90	Foraminifera	VII	AA-6303	10,825 ± 80	Mollusc	VII
AA-1523	15,800 ± 400	<2 µm org	VI	AA-3976	8,965 ± 110	Foraminifera	VII	AA-6304	43,450 ± 2100	Mollusc	VII
AA-1800	6,990 ± 70	Mollusc	VI	AA-3995	17,020 ± 170	Organic Conc	VII	AA-6305	9,500 ± 105	Mollusc	VII
AA-1801	4,780 ± 80	Mollusc	VI	AA-3997	375 ± 65	Plant Macros	VII	AA-6306	9,630 ± 80	Mollusc	VII
AA-1825	7,950 ± 100	<125 µm org	VI	AA-4026	13,585 ± 110	Foraminifera	VII	AA-6307	10,740 ± 85	Mollusc	VII
AA-1915	2,890 ± 115	Mollusc	VI	AA-4027	8,755 ± 80	Foraminifera	VII	AA-6308	10,635 ± 80	Mollusc	VII
AA-1916	9,340 ± 84	Mollusc	VI	AA-4160	8,300 ± 65	Foraminifera	VII	AA-6309	10,435 ± 85	Mollusc	VII
AA-1917	3,920 ± 60	Mollusc	VI	AA-4244A	37,090 ± 1100	Mollusc	VII	AA-6310	10,445 ± 75	Mollusc	VII
AA-1918	10,380 ± 120	<125 µm org	VI	AA-4244B	40,630 ± 1400	Mollusc	VII	AA-6311	9,800 ± 75	Mollusc	VII
AA-2084	720 ± 220	Mollusc	VI	AA-4249	9,270 ± 110	Mollusc	VII	AA-6312	8,580 ± 70	Mollusc	VII
AA-2219	1,732 ± 85	<125 µm org	VI	AA-4250A	10,015 ± 120	Mollusc	VII	AA-6452	10,115 ± 75	Mollusc	VII
AA-2223	9,090 ± 90	Mollusc	VII	AA-4250B	8,320 ± 105	Mollusc	VII	AA-6453	7,800 ± 70	Bulk Sed	VII
AA-2224	39,000 ± 1800	Mollusc	VII	AA-4255	9,355 ± 70	Foraminifera	VII	AA-6462	9,890 ± 85	Mollusc	VII
AA-2275	8,390 ± 250	<2 µm org	VI	AA-4335	15,025 ± 95	Foraminifera	VII	AA-6463	8,195 ± 65	Mollusc	VII
AA-2276	5,084 ± 70	<2 µm org	VI	AA-4336	2,855 ± 80	Foraminifera	VII	AA-6464	8,525 ± 80	Mollusc	VII
AA-2348	43,300 ± 3000	Mollusc	VII	AA-4338	985 ± 50	Foraminifera	VII	AA-6465	9,645 ± 85	Mollusc	VII
AA-2349	8,500 ± 90	Mollusc	VII	AA-4529	5,835 ± 60	Foraminifera	VII	AA-6466	5,230 ± 60	Mollusc	VII
AA-2350	9,500 ± 90	Mollusc	VII	AA-4530	9,270 ± 80	Foraminifera	VII	AA-6468	10,445 ± 100	Foraminifera	VII
AA-2351	Modern	Plant Macros	VII	AA-4531	13,700 ± 145	Foraminifera	VII	AA-6469	11,065 ± 105	Foraminifera	VII
AA-2352	Modern	Mollusc	VII	AA-4574	8,260 ± 80	Bulk Sed	VII	AA-6470	13,160 ± 115	Foraminifera	VII
AA-2496	10,360 ± 160	Mollusc	VI	AA-4575	8,925 ± 105	Bulk Sed	VII	AA-6471	12,925 ± 130	Foraminifera	VII
AA-2625	7,765 ± 105	Mollusc	VII	AA-4665	11,990 ± 100	Foraminifera	VII	AA-6472	10,035 ± 130	Foraminifera	VII
AA-2631	5,160 ± 60	Bone	VI	AA-4666	9,375 ± 70	Foraminifera	VII	AA-6473	9,310 ± 100	Foraminifera	VII
AA-2632	>45,000	Mollusc	VI	AA-4667	11,575 ± 135	Foraminifera	VII	AA-6521	10,415 ± 240	Humic Acids	VII
AA-2633	9,450 ± 95	Mollusc	VI	AA-4686	34,025 ± 725	Foraminifera	VII	AA-6522	7,430 ± 230	Humic Acids	VII
AA-2637	9,200 ± 200	Foraminifera	VI	AA-4687	32,150 ± 1200	Foraminifera	VII	AA-6523	1,010 ± 50	Humic Acids	VII
AA-2641	8,680 ± 140	Mollusc	VI	AA-4689	11,895 ± 130	Foraminifera	VII	AA-6524	970 ± 150	Humic Acids	VII
AA-2642	45,000 ± 4000	Mollusc	VI	AA-4700	19,855 ± 210	Foraminifera	VII	AA-6525	3,605 ± 75	Humic Acids	VII
AA-3098	2,210 ± 50	Organic Conc	VII	AA-4702	11,550 ± 75	Foraminifera	VII	AA-6526	4,905 ± 100	Humic Acids	VII
AA-3099	4,461 ± 50	Organic Conc	VII	AA-4702	11,550 ± 75	Foraminifera	VII	AA-6829	3,210 ± 70	Foraminifera	VII
AA-3101	4,205 ± 50	Bulk Sed	VII	AA-4703	40,700 ± 1500	Foraminifera	VII	AA-6830	1,382 ± 65	Foraminifera	VII
AA-3101	4,205 ± 50	Organic Conc	VII	AA-4704	43,200 ± 60	Foraminifera	VII	AA-6846	Too Small	Foraminifera	VII
AA-3101	4,205 ± 50	Organic Conc	VII	AA-4706	45,500 ± 55	Foraminifera	VII	AA-6847	1,300 ± 55	Foraminifera	VII
AA-3102	8,650 ± 75	Organic Conc	VII	AA-4709	12,030 ± 85	Foraminifera	VII	AA-6848	14,845 ± 190	Foraminifera	VII
AA-3103	8,730 ± 80	Mollusc	VI	AA-4916	10,375 ± 80	Foraminifera	VII	AA-6849	13,300 ± 145	Foraminifera	VII
AA-3104	8,660 ± 65	Mollusc	VI	AA-4916	8,280 ± 120	Foraminifera	VII	AA-6850	10,850 ± 185	Foraminifera	VII
AA-3108	3,440 ± 50	Foraminifera	VI	AA-4917	13,180 ± 100	Foraminifera	VII	AA-6851	13,635 ± 190	Foraminifera	VII
AA-3109	9,385 ± 140	Foraminifera	VI	AA-4918	7,830 ± 120	Foraminifera	VIII	AA-6852	12,110 ± 185	Foraminifera	VII
AA-3254	44,200 ± 2300	Mollusc	VII	AA-5032	10,530 ± 95	Foraminifera	VII	AA-6853	12,975 ± 355	Foraminifera	VII
AA-3256	13,720 ± 95	Organic Conc	VII	AA-5033	10,530 ± 90	Foraminifera	VII	AA-6854	10,080 ± 75	Mollusc	VII
AA-3273	3,285 ± 55	Bulk Sed	VII	AA-5034	19,070 ± 260	Foraminifera	VII	AA-6866	10,895 ± 95	Foraminifera	VII
AA-3274	3,620 ± 55	Bulk Sed	VII	AA-5063	13,625 ± 150	Foraminifera	VII	AA-7008	5,660 ± 100	Plant Macros	VII
AA-3275	6,170 ± 55	Bulk Sed	VII	AA-5117	9,000 ± 170	Mollusc	VII	AA-7009	10,435 ± 95	Bulk Sed	VIII
AA-3277	4,794 ± 70	Organic Conc	VII	AA-5290	6,380 ± 90	Foraminifera	VII	AA-7010	14,115 ± 110	Bulk Sed	VIII
AA-3278	7,805 ± 70	Organic Conc	VII	AA-5291	9,425 ± 150	Foraminifera	VII	AA-7011	13,195 ± 125	Bulk Sed	VIII
AA-3280	8,630 ± 70	Organic Conc	VII	AA-5292	11,760 ± 170	Foraminifera	VII	AA-7012	2,070 ± 70	Plant Macros	VII
AA-3286	6,155 ± 155	Organic Conc	VII	AA-5835	10,555 ± 75	Mollusc	VII	AA-7136	10,630 ± 380	Foraminifera	VII
AA-3338	21,500 ± 240	Foraminifera	VI	AA-5836	10,615 ± 75	Mollusc	VII	AA-7137	26,015 ± 1320	Foraminifera	VII

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
AA-7138	15,365 ± 250	Foraminifera	VII	AA-10232	38,700 ± 1200	Mollusc	VIII	AA-12608	34,820 ± 730	Mollusc	VIII
AA-7139	9,670 ± 245	Foraminifera	VII	AA-10245	10,750 ± 65	Mollusc	VIII	AA-12609	8,555 ± 95	Mollusc	VIII
AA-7140	14,465 ± 200	Foraminifera	VII	AA-10248	10,245 ± 70	Mollusc	VIII	AA-12610	8,130 ± 65	Mollusc	VIII
AA-7141	10,355 ± 205	Foraminifera	VII	AA-10249	9,605 ± 60	Mollusc	VIII	AA-12884	8,805 ± 60	Mollusc	VIII
AA-7142	Modern	Organic Conc	VIII	AA-10250	11,285 ± 65	Mollusc	VIII	AA-12885	8,530 ± 60	Foraminifera	VIII
AA-7144	17,305 ± 140	Organic Conc	VIII	AA-10251	8,445 ± 55	Mollusc	VIII	AA-12886	2,180 ± 50	Foraminifera	VIII
AA-7557	40,950 ± 2100	Mollusc	VII	AA-10252	30,790 ± 450	Mollusc	VIII	AA-12887	8,270 ± 70	Mollusc	VIII
AA-7558	>38,900	Mollusc	VII	AA-10253	9,040 ± 85	Foraminifera	VIII	AA-12888	8,260 ± 60	Mollusc	VIII
AA-7559	11,685 ± 90	Mollusc	VII	AA-10254	9,075 ± 75	Foraminifera	VIII	AA-12889	8,170 ± 60	Mollusc	VIII
AA-7560	10,000 ± 75	Mollusc	VII	AA-10255	10,780 ± 140	Foraminifera	VIII	AA-12890	8,465 ± 90	Foraminifera	VIII
AA-7561	9,215 ± 80	Mollusc	VIII	AA-10256	11,170 ± 100	Foraminifera	VIII	AA-12891	855 ± 60	Foraminifera	VIII
AA-7562	11,125 ± 100	Mollusc	VIII	AA-10257	7,785 ± 75	Foraminifera	VIII	AA-12892	1,680 ± 50	Foraminifera	VIII
AA-7891	10,470 ± 65	Mollusc	VII	AA-10258	10,695 ± 85	Mollusc	VIII	AA-12893	7,985 ± 85	Foraminifera	VIII
AA-7892	7,995 ± 65	Mollusc	VIII	AA-10565	1,450 ± 60	Mixed	VIII	AA-12896	13,105 ± 85	Foraminifera	VIII
AA-7893	8,360 ± 60	Mollusc	VIII	AA-10566	815 ± 55	Mollusc	VIII	AA-12897	11,535 ± 85	Foraminifera	VIII
AA-7894	9,270 ± 60	Mollusc	VII	AA-10567	1,440 ± 70	Foraminifera	VIII	AA-12898	28,005 ± 350	Foraminifera	VIII
AA-7895	9,740 ± 65	Mollusc	VII	AA-10568	20,840 ± 180	Foraminifera	VIII	AA-12899	21,255 ± 200	Foraminifera	VIII
AA-7896	9,980 ± 70	Mollusc	VII	AA-10569	34,010 ± 675	Foraminifera	VIII	AA-13050	8,245 ± 75	Mollusc	VIII
AA-7897	>43,700	Mollusc	VIII	AA-10603	1,310 ± 60	Foraminifera	VIII	AA-13051	10,470 ± 120	Mollusc	VIII
AA-7898	6,655 ± 65	Mollusc	VIII	AA-10645	8,760 ± 65	Mollusc	VIII	AA-13052	12,125 ± 90	Foraminifera	VIII
AA-7899	34,790 ± 710	Mollusc	VIII	AA-10646	34,710 ± 690	Mollusc	VIII	AA-13053	10,430 ± 80	Mollusc	VIII
AA-7900	7,810 ± 70	Mollusc	VIII	AA-10647	24,035 ± 240	Mollusc	VIII	AA-13054	10,805 ± 80	Mollusc	VIII
AA-7901	>43,900	Mollusc	VIII	AA-10648	8,525 ± 60	Mollusc	VIII	AA-13055	8,395 ± 70	Mollusc	VIII
AA-8034	14,850 ± 205	Foraminifera	VII	AA-10649	8,045 ± 60	Mollusc	VIII	AA-13172	9,505 ± 80	Mollusc	VIII
AA-8035	13,450 ± 220	Foraminifera	VII	AA-10650	11,095 ± 110	Foraminifera	VIII	AA-13173	9,025 ± 90	Mollusc	VIII
AA-8324	4,850 ± 55	Organic Conc	VII	AA-10651	7,840 ± 70	Foraminifera	VIII	AA-13174	8,915 ± 65	Mollusc	VIII
AA-8325	4,010 ± 50	Organic Conc	VII	AA-10652	8,785 ± 60	Mollusc	VIII	AA-13175	9,125 ± 65	Mollusc	VIII
AA-8326	13,285 ± 105	Foraminifera	VII	AA-10653	10,790 ± 70	Foraminifera	VIII	AA-13228	7,835 ± 90	Foraminifera	VIII
AA-8327	9,435 ± 50	Foraminifera	VII	AA-10655	2,655 ± 45	Foraminifera	VIII	AA-13229	30,170 ± 475	Foraminifera	VIII
AA-8328	1,125 ± 50	Foraminifera	VII	AA-10656	8,920 ± 65	Foraminifera	VIII	AA-13230	21,070 ± 220	Foraminifera	VIII
AA-8329	12,865 ± 305	Foraminifera	VII	AA-10658	29,055 ± 350	Foraminifera	VIII	AA-13231	13,055 ± 120	Foraminifera	VIII
AA-8330	12,470 ± 205	Foraminifera	VII	AA-11432	1,745 ± 160	Mollusc	VIII	AA-13232	>49,230	Foraminifera	VIII
AA-8331	12,085 ± 115	Foraminifera	VII	AA-11433	6,220 ± 130	Foraminifera	VIII	AA-13233	12,970 ± 90	Foraminifera	VIII
AA-8332	1,798 ± 111	Foraminifera	VII	AA-11434	7,795 ± 165	Foraminifera	VIII	AA-13234	16,575 ± 140	Foraminifera	VIII
AA-8333	9,105 ± 142	Foraminifera	VII	AA-11435	8,305 ± 170	Foraminifera	VIII	AA-13235	24,365 ± 355	Foraminifera	VIII
AA-8388	10,560 ± 75	Mollusc	VII	AA-11436	8,750 ± 165	Foraminifera	VIII	AA-13236	7,395 ± 70	Foraminifera	VIII
AA-8389	11,075 ± 85	Mollusc	VII	AA-11437	8,715 ± 165	Foraminifera	VIII	AA-13237	5,300 ± 60	Mollusc	VIII
AA-8390	9,385 ± 75	Mollusc	VII	AA-11438	8,865 ± 165	Mollusc	VIII	AA-13238	15,270 ± 120	Foraminifera	VIII
AA-8391	10,090 ± 75	Mollusc	VII	AA-11440	12,035 ± 80	Foraminifera	VIII	AA-13239	19,635 ± 150	Foraminifera	VIII
AA-8392	9,000 ± 90	Foraminifera	VII	AA-11441	9,515 ± 70	Foraminifera	VIII	AA-13241	8,940 ± 70	Mollusc	VIII
AA-8393	9,325 ± 100	Mollusc	VIII	AA-11442	9,245 ± 85	Foraminifera	VIII	AA-13242	11,545 ± 95	Organic Conc	VIII
AA-8394	8,875 ± 110	Mollusc	VIII	AA-11443	9,750 ± 70	Foraminifera	VIII	AA-13243	7,330 ± 65	Organic Conc	VIII
AA-8395	8,995 ± 120	Mollusc	VIII	AA-11444	9,410 ± 70	Foraminifera	VIII	AA-13244	4,025 ± 55	Organic Conc	VIII
AA-8570	7,960 ± 105	Wood	VII	AA-11445	10,170 ± 70	Foraminifera	VIII	AA-13352	6,615 ± 115	Foraminifera	VIII
AA-8777	11,790 ± 275	Foraminifera	VII	AA-11446	85 ± 45	Foraminifera	VIII	AA-13353	1,055 ± 65	Foraminifera	VIII
AA-8959	10,530 ± 135	Organic Conc	VIII	AA-11447	8,580 ± 70	Foraminifera	VIII	AA-14024	9,065 ± 80	Mollusc	VIII
AA-8960	12,220 ± 130	Organic Conc	VIII	AA-11448	9,955 ± 75	Foraminifera	VIII	AA-14025	9,370 ± 80	Mollusc	VIII
AA-8961	2,215 ± 55	Foraminifera	VIII	AA-11449	875 ± 50	Foraminifera	VIII	AA-14026	9,090 ± 95	Mollusc	VIII
AA-8962	7,675 ± 115	Foraminifera	VIII	AA-11450	31,065 ± 455	Mollusc	VIII	AA-14027	38,620 ± 1110	Mollusc	VIII
AA-8963	7,600 ± 60	Foraminifera	VIII	AA-11451	35,280 ± 760	Mollusc	VIII	AA-14028	8,905 ± 65	Mollusc	VIII
AA-8964	9,730 ± 70	Foraminifera	VIII	AA-11452	39,145 ± 1180	Mollusc	VIII	AA-14029	8,950 ± 65	Mollusc	VIII
AA-8965	22,210 ± 255	Foraminifera	VIII	AA-11453	40,760 ± 1450	Mollusc	VIII	AA-14030	8,795 ± 95	Mollusc	VIII
AA-8966	30,175 ± 405	Foraminifera	VIII	AA-11583	3,085 ± 70	Foraminifera	VIII	AA-14202	11,080 ± 95	Foraminifera	VIII
AA-9022	4,040 ± 105	Organic Conc	VIII	AA-11584	9,975 ± 100	Foraminifera	VIII	AA-14203	21,210 ± 190	Foraminifera	VIII
AA-9024	4,060 ± 105	Organic Conc	VIII	AA-11585	1,465 ± 55	Foraminifera	VIII	AA-14204	19,565 ± 160	Foraminifera	VIII
AA-9062	33,170 ± 590	Foraminifera	VIII	AA-11586	9,085 ± 85	Foraminifera	VIII	AA-14205	2,070 ± 65	Mollusc	VIII
AA-9063	>47,240	Foraminifera	VIII	AA-11587	11,390 ± 100	Foraminifera	VIII	AA-14206	8,605 ± 85	Mollusc	VIII
AA-9064	46,700 ± 3000	Foraminifera	VIII	AA-11588	17,670 ± 140	Foraminifera	VIII	AA-14207	8,650 ± 85	Mollusc	VIII
AA-9065	1,000 ± 60	Foraminifera	VIII	AA-11589	23,880 ± 240	Foraminifera	VIII	AA-14208	12,210 ± 110	Foraminifera	VIII
AA-9066	5,840 ± 120	Foraminifera	VIII	AA-11590	8,460 ± 95	Foraminifera	VIII	AA-14209	13,050 ± 140	Foraminifera	VIII
AA-9067	33,615 ± 600	Foraminifera	VIII	AA-11684	8,510 ± 90	Foraminifera	VIII	AA-14210	8,640 ± 105	Foraminifera	VIII
AA-9288	16,380 ± 165	Bulk Sed	VIII	AA-11870	2,480 ± 110	Foraminifera	VIII	AA-14211	5,215 ± 75	Foraminifera	VIII
AA-9289	7,575 ± 125	Bulk Sed	VIII	AA-11871	1,155 ± 56	Foraminifera	VIII	AA-14212	9,240 ± 90	Foraminifera	VIII
AA-9290	7,880 ± 90	Bulk Sed	VIII	AA-11872	1,390 ± 55	Foraminifera	VIII	AA-14213	880 ± 70	Foraminifera	VIII
AA-9291	6,755 ± 90	Bulk Sed	VIII	AA-11874	9,290 ± 80	Foraminifera	VIII	AA-14214	Modern	Mollusc	VIII
AA-9355	14,280 ± 205	Foraminifera	VIII	AA-11875	12,325 ± 80	Foraminifera	VIII	AA-14215	25,330 ± 310	Foraminifera	VIII
AA-9356	23,890 ± 260	Foraminifera	VIII	AA-11876	7,830 ± 60	Mollusc	VIII	AA-14216	18,865 ± 175	Foraminifera	VIII
AA-9361	27,720 ± 340	Foraminifera	VIII	AA-11877	895 ± 50	Coral	VIII	AA-14217	18,475 ± 145	Foraminifera	VIII
AA-9362	4,110 ± 65	Organic Conc	VIII	AA-11878	27,255 ± 305	Foraminifera	VIII	AA-14218	36,020 ± 805	Foraminifera	VIII
AA-9363	6,940 ± 75	Organic Conc	VIII	AA-11879	8,490 ± 200	Mollusc	VIII	AA-14219	41,800 ± 1700	Foraminifera	VIII
AA-9364	14,980 ± 90	Foraminifera	VIII	AA-11880	12,115 ± 260	Foraminifera	VIII	AA-14220	36,870 ± 970	Foraminifera	VIII
AA-10117	7,015 ± 65	Organic Conc	VIII	AA-11881	>42,000	Foraminifera	VIII	AA-14681	1,280 ± 45	Mollusc	VIII
AA-10118	11,235 ± 95	Organic Conc	VIII	AA-11882	8,450 ± 70	Mollusc	VIII	AA-14682	10,510 ± 80	Mollusc	VIII
AA-10119	17,575 ± 185	Organic Conc	VIII	AA-12029	10,800 ± 130	Foraminifera	VIII	AA-14683	10,750 ± 70	Mollusc	VIII
AA-10120	7,220 ± 65	Organic Conc	VIII	AA-12605	43,750 ± 2100	Mollusc	VIII	AA-14684	3,105 ± 50	Mollusc	VIII
AA-10121	13,470 ± 105	Organic Conc	VIII	AA-12606	37,760 ± 1050	Mollusc	VIII	AA-14685	16,800 ± 135	Foraminifera	VIII
AA-10122	17,855 ± 145	Organic Conc	VIII	AA-12607	8,175 ± 95	Mollusc	VIII	AA-14686	8,715 ± 65	Mollusc	VIII

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
AA-14687	8,560 ± 70	Mollusc	VIII	AA-19903	4950 ± 100	Foraminifera	IX	AA-21763	26955 ± 340	Organic Conc	IX
AA-15123	8,350 ± 70	Mollusc	VIII	AA-19904	5790 ± 80	Foraminifera	IX	AA-21764	3085 ± 45	Organic Conc	IX
AA-15124	9,460 ± 75	Mollusc	VIII	AA-19905	6250 ± 60	Foraminifera	IX	AA-21765	5230 ± 50	Organic Conc	IX
AA-15125	9,465 ± 100	Mollusc	VIII	AA-19906	3935 ± 110	Foraminifera	IX	AA-21766	3940 ± 45	Organic Conc	IX
AA-15126	9,030 ± 75	Mollusc	VIII	AA-19907	3335 ± 100	Foraminifera	IX	AA-21767	5925 ± 60	Organic Conc	IX
AA-15127	9,220 ± 75	Mollusc	VIII	AA-19908	10855 ± 125	Foraminifera	IX	AA-21768	7270 ± 65	Organic Conc	IX
AA-15128	8,160 ± 70	Mollusc	VIII	AA-19909	29770 ± 470	Foraminifera	IX	AA-21769	30695 ± 460	Organic Conc	IX
AA-15129	8,055 ± 70	Mollusc	VIII	AA-19910	25900 ± 620	Foraminifera	IX	AA-21770	5820 ± 90	Organic Conc	IX
AA-15130	8,325 ± 75	Mollusc	VIII	AA-19911	32500 ± 1420	Foraminifera	IX	AA-21771	8980 ± 70	Organic Conc	IX
AA-15131	9,335 ± 75	Mollusc	VIII	AA-19912	8,545 ± 170	bivalve	IX	AA-23218	6,210 ± 55	Mollusc	IX
AA-15132	24,780 ± 230	Mollusc	VIII	AA-19913	7,240 ± 140	Foraminifera	IX	AA-23219	3,050 ± 80	Foraminifera	IX
AA-15659	11,555 ± 130	Foraminifera	VIII	AA-19914	8,400 ± 230	Foraminifera	IX	AA-23220	10,625 ± 90	Mollusc	IX
AA-15687	13,100 ± 110	Foraminifera	VIII	AA-19915	11,830 ± 125	mixed carb	IX	AA-23221	14,550 ± 150	Foraminifera	IX
AA-15688	11,995 ± 145	Foraminifera	VIII	AA-19916	>39,000 ±	Foraminifera	IX	AA-23222	14970 ± 140	Foraminifera	IX
AA-15689	8,575 ± 75	Foraminifera	VIII	AA-19917	10,240 ± 90	bivalve	IX	AA-23223	39,305 ± 1155	Organic Conc	IX
AA-15690	11,750 ± 105	Foraminifera	VIII	AA-19918	13,024 ± 120	bivalve	IX	AA-23224	28055 ± 315	Organic Conc	IX
AA-15691	18,270 ± 140	Foraminifera	VIII	AA-19919	8880 ± 75	Organic Conc	IX	AA-23225	30,220 ± 420	Organic Conc	IX
AA-15692	21,970 ± 195	Foraminifera	VIII	AA-19920	9435 ± 75	Organic Conc	IX	AA-23226	23,940 ± 225	Organic Conc	IX
AA-15693	37,935 ± 1020	Foraminifera	VIII	AA-19921	9615 ± 75	Organic Conc	IX	AA-23227	12,600 ± 80	Organic Conc	IX
AA-15694	28,050 ± 335	Foraminifera	VIII	AA-19922	8855 ± 95	Organic Conc	IX	AA-23228	19385 ± 135	Organic Conc	IX
AA-15695	36,370 ± 820	Foraminifera	VIII	AA-19923	36800 ± 900	Organic Conc	IX	AA-23405	22,970 ± 210	Organic Conc	IX
AA-15696	32,820 ± 530	Mollusc	VIII	AA-19924	26585 ± 280	Organic Conc	IX	AA-23406	25,690 ± 300	Organic Conc	IX
AA-15697	27,465 ± 360	Foraminifera	VIII	AA-19925	25750 ± 320	Organic Conc	IX	AA-23407	20,780 ± 220	Organic Conc	IX
AA-15698	10,070 ± 95	Foraminifera	VIII	AA-19926	29400 ± 1200	Organic Conc	IX	AA-23408	6640 ± 110	Organic Conc	IX
AA-15699	24,835 ± 240	Foraminifera	VIII	AA-20192	9,745 ± 85	bivalve	IX	AA-23409	27,120 ± 300	Organic Conc	IX
AA-15700	9,565 ± 80	Foraminifera	VIII	AA-20193	10,410 ± 150		IX	AA-23410	21,840 ± 230	Organic Conc	IX
AA-15701	9,825 ± 95	Foraminifera	VIII	AA-20194	10,990 ± 190	Foram/mollusc	IX	AA-23411	17760 ± 120	Organic Conc	IX
AA-15702	10,310 ± 90	Foraminifera	VIII	AA-20725	13250 ± 280	Foraminifera	IX	AA-23412	27580 ± 320	Organic Conc	IX
AA-15703	10,335 ± 95	Foraminifera	VIII	AA-20726	>41470 ±	Foraminifera	IX	AA-23413	25870 ± 250	Organic Conc	IX
AA-15704	17,165 ± 140	Foraminifera	VIII	AA-20727	>44,060 ±	Foraminifera	IX	AA-23414	24090 ± 205	Organic Conc	IX
AA-15705	22,110 ± 230	Foraminifera	VIII	AA-20728	26525 ± 360	Foraminifera	IX	AA-23415	31310 ± 480	Organic Conc	IX
AA-15706	22,225 ± 245	Foraminifera	VIII	AA-20729	29990 ± 405	Foraminifera	IX	AA-23416	30640 ± 440	Organic Conc	IX
AA-15707	27,130 ± 335	Foraminifera	VIII	AA-20730	31040 ± 1820	Foraminifera	IX	AA-24831	7060 ± 80	Mollusc	IX
AA-15708	19,215 ± 150	Foraminifera	VIII	AA-20731	5210 ± 510	Foraminifera	IX	AA-24832	15,475 ± 95	Foraminifera	IX
AA-16403	9,100 ± 80	Mollusc	VIII	AA-20732	11,730 ± 305	Foraminifera	IX	AA-24833	9680 ± 65	Foraminifera	IX
AA-16404	9,600 ± 140	Mollusc	VIII	AA-20733	12,130 ± 290	Foraminifera	IX	AA-24834	11,240 ± 140	Foraminifera	IX
AA-16405	9,480 ± 80	Mollusc	VIII	AA-20734	12,410 ± 165	ossioles	IX	AA-24835	9,220 ± 75	Foraminifera	IX
AA-17254	11,255 ± 75	Mollusc	VIII	AA-20735	12,690 ± 195	Foraminifera	IX	AA-24836	1,105 ± 65	Foraminifera	IX
AA-17255	9,130 ± 65	Mollusc	VIII	AA-20736	12,810 ± 205	Foram/mollusc	IX	AA-24837	2,630 ± 75	Foraminifera	IX
AA-17256	100 ± 40	Mollusc	VIII	AA-20737	18,085 ± 325	Foraminifera	IX	AA-24838	3,295 ± 70	Foraminifera	IX
AA-17257	9,650 ± 70	Mollusc	VIII	AA-20738	4350 ± 75	Organic Conc	IX	AA-24839	1,575 ± 45	Mollusc	IX
AA-17258	8,325 ± 60	Mollusc	VIII	AA-20739	3025 ± 55	Organic Conc	IX	AA-24840	8,250 ± 60	Mollusc	IX
AA-17260	8,785 ± 80	Mollusc	VIII	AA-20740	5080 ± 60	Organic Conc	IX	AA-24841	26,570 ± 490	Foraminifera	IX
AA-17261	9,045 ± 80	Mollusc	VIII	AA-20741	8010 ± 90	Organic Conc	IX	AA-24962	29400 ± 1200	Organic Conc	IX
AA-17262	9,885 ± 170	Mollusc	VIII	AA-20742	9855 ± 100	Organic Conc	IX	AA-20192	>49,900 ±	Foraminifera	IX
AA-17263	11,410 ± 130	Mollusc	VIII	AA-20743	26265 ± 325	Organic Conc	IX	AA-25274	6565 ± 60	Organic Conc	IX
AA-17264	10,180 ± 90	Mollusc	VIII	AA-20744	31605 ± 520	Organic Conc	IX	AA-25275	6520 ± 55	Organic Conc	IX
AA-17265	9,305 ± 85	Mollusc	VIII	AA-20745	3205 ± 60	Organic Conc	IX	AA-25276	6665 ± 55	Organic Conc	IX
AA-17379	7,785 ± 140	Foraminifera	VIII	AA-20746	13330 ± 95	Organic Conc	IX	AA-25277	2755 ± 45	Organic Conc	IX
AA-17380	8,155 ± 130	Foraminifera	VIII	AA-20747	17800 ± 175	Organic Conc	IX	AA-25278	2925 ± 45	Organic Conc	IX
AA-17391	10,270 ± 285	Foraminifera	VIII	AA-20748	26895 ± 375	Organic Conc	IX	AA-25279	2805 ± 50	Organic Conc	IX
AA-17392	9,145 ± 75	Foraminifera	VIII	AA-20788	19,290 ± 180	Foraminifera	IX	AA-25280	3580 ± 50	Organic Conc	IX
AA-17393	10,225 ± 100	Foraminifera	VIII	AA-20789	12,555 ± 750	Foraminifera	IX	AA-25281	3345 ± 50	Organic Conc	IX
AA-17861	9,355 ± 75	Mollusc	VIII	AA-20790	11795 ± 85	Foraminifera	IX	AA-25282	3825 ± 50	Organic Conc	IX
AA-18382	20,780 ± 260	Foraminifera	IX	AA-20791	20,465 ± 350	Foraminifera	IX	AA-25283	3580 ± 50	Organic Conc	IX
AA-18383	15,125 ± 155	Foraminifera	IX	AA-21742	460 ± 90	Foraminifera	IX	AA-25284	1065 ± 45	brachiopod	IX
AA-18384	11,595 ± 95	Foraminifera	IX	AA-21743	2,030 ± 55	Foraminifera	IX	AA-26516	36500 ± 940	Foraminifera	IX
AA-18386	17,931 ± 210	Foraminifera	IX	AA-21744	765 ± 55	Foraminifera	IX	AA-26517	12,535 ± 140	Foraminifera	IX
AA-18387	>42,000 ±	Foraminifera	IX	AA-21745	6,185 ± 55	Foraminifera	IX	AA-26518	2,150 ± 40	Foraminifera	IX
AA-18388	12,370 ± 105	Foraminifera	IX	AA-21746	650 ± 65	Foraminifera	IX	AA-26519	10,450 ± 85	Mollusc	IX
AA-18389	>40,000 ±	Foraminifera	IX	AA-21747	2,815 ± 75	Foraminifera	IX	AA-26520	26040 ± 260	Organic Conc	IX
AA-18390	>44,000 ±	Foraminifera	IX	AA-21748	860 ± 65	Foraminifera	IX	AA-26521	23900 ± 210	Organic Conc	IX
AA-18391	12,680 ± 125	Mollusc	IX	AA-21749	5,685 ± 70	Foraminifera	IX	AA-26522	26300 ± 270	Organic Conc	IX
AA-18392	11,028 ± 98	Ostracod	IX	AA-21750	10,300 ± 300	Foraminifera	IX	AA-26523	30310 ± 460	Organic Conc	IX
AA-18393	12,115 ± 135	Foraminifera	IX	AA-21751	31,710 ± 1900	Foraminifera	IX	AA-26524	28660 ± 350	Organic Conc	IX
AA-18394	>44,000 ±	Foraminifera	IX	AA-21752	18180 ± 190	Foraminifera	IX	AA-26525	27250 ± 290	Organic Conc	IX
AA-18395	36,380 ± 890	Foraminifera	IX	AA-21753	2,820 ± 45	Foraminifera	IX	AA-27262	10,430 ± 60	benthic forams	IX
AA-18396	>49,130 ±	Foraminifera	IX	AA-21754	13450 ± 90	Organic Conc	IX	AA-27751	7920 ± 110	Foraminifera	IX
AA-18397	21,245 ± 180	Foraminifera	IX	AA-21755	13365 ± 90	Organic Conc	IX	AA-27752	7485 ± 150	Foraminifera	IX
AA-18398	38,670 ± 1030	Foraminifera	IX	AA-21756	14550 ± 95	Organic Conc	IX	AA-27753	8545 ± 160	Mollusc	IX
AA-18399	16,450 ± 135	Foraminifera	IX	AA-21757	29100 ± 400	Organic Conc	IX	AA-27754	9125 ± 185	Mollusc	IX
AA-18400	>34,000 ±	coral	IX	AA-21758	32680 ± 660	Organic Conc	IX	AA-27755	11840 ± 200		IX
AA-18794	1,465 ± 65	Other	IX	AA-21759	4360 ± 50	Organic Conc	IX	AA-27756	26660 ± 490	Foraminifera	IX
AA-19900	16,055 ± 125	Foraminifera	IX	AA-21760	33465 ± 570	Organic Conc	IX	AA-27757	13640 ± 130	Foraminifera	IX
AA-19901	20,895 ± 250	Foraminifera	IX	AA-21761	13830 ± 90	Organic Conc	IX	AA-27758	17624 ± 160	Foraminifera	IX
AA-19902	14,810 ± 160	Foraminifera	IX	AA-21762	30510 ± 415	Organic Conc	IX	AA-27759	35290 ± 880	Foraminifera	IX

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
AA-27760	10,350 ± 80	Foraminifera	IX	AA-31265	2,875 ± 95	Mollusc	IX	AAR-4480	8,200 ± 90	Foraminifera	IX
AA-27761	3,985 ± 50	Foraminifera	IX	AA-31266	9,240 ± 200	Foraminifera	IX	AAR-4481	11,980 ± 140	Foraminifera	IX
AA-27762	5 ± 40	Mollusc	IX	AA-31267	10,705 ± 80	Mollusc	IX				
AA-27763	25,330 ± 640	Foraminifera	IX	AA-31268	19,750 ± 180	Foraminifera	IX	Beta-42659	320 ± 90	Charcoal	VIII
AA-27764	8,845 ± 60	Mollusc	IX	AA-31269	21370 ± 270	Foraminifera	IX	Beta-42660	510 ± 80		VIII
AA-27765	4,270 ± 70	Mollusc	IX	AA-31270	11,015 ± 85	Foraminifera	IX	Beta-52074	670 ± 150	Charcoal	VIII
AA-27766	5,645 ± 70	Mollusc	IX	AA-31271	19,790 ± 240	Foraminifera	IX	Beta-52272	450 ± 60	Wood twigs	VIII
AA-27801	3735 ± 60	Organic Conc	IX	AA-31272	17,010 ± 130	Foraminifera	IX	Beta-52273	230 ± 60	Wood	VIII
AA-27802	20490 ± 260	Organic Conc	IX	AA-31747	6180 ± 170	Foraminifera	IX	Beta-52274	390 ± 70	Wood twigs	VIII
AA-27803	24680 ± 490	Organic Conc	IX	AA-31748	9,270 ± 80	Mollusc	IX	Beta-52275	270 ± 60	Wood twigs	VIII
AA-29184	12,100 ± 110	Foraminifera	IX	AA-31751	8180 ± 80	Foraminifera	IX	Beta-52276	380 ± 80	Charcoal	VIII
AA-29185	3,880 ± 65	Foraminifera	IX	AA-31752	9580 ± 100	Foraminifera	IX	Beta-52994	110 ± 50	wood twigs	VIII
AA-29186	2,320 ± 65	Foraminifera	IX	AA-31753	10,940 ± 130	Foraminifera	IX	Beta-53642	240 ± 80	Wood	VIII
AA-29187	10,910 ± 140	Foraminifera	IX	AA-31754	10,480 ± 85	Mollusc	IX	Beta-53643	60 ± 80	Wood	VIII
AA-29188	10,870 ± 140	Foraminifera	IX	AA-31755	40,500 ± 1500		IX	Beta-61068	800 ± 70	Wood	VIII
AA-29189	11,520 ± 140	Foraminifera	IX	AA-31756	25050 ± 240	Foraminifera	IX	Beta-61070	2,110 ± 90	Wood	VIII
AA-29190	12,500 ± 120	Foraminifera	IX	AA-31757	1,900 ± 60	Foraminifera	IX	Beta-61071	1,800 ± 70	Wood twigs	VIII
AA-29191	12,845 ± 90	Foraminifera	IX	AA-31758	3,810 ± 70	Foraminifera	IX	Beta-61072	1,490 ± 60	Moss	VIII
AA-29192	9,590 ± 100	Foraminifera	IX	AA-31759	11,970 ± 130	Foraminifera	IX	Beta-61073	470 ± 60	Bone	VIII
AA-29193	25,910 ± 350	Foraminifera	IX	AA-31760	9,120 ± 130	Foraminifera	IX	Beta-61609	1,130 ± 50	Mammal Fat	VIII
AA-29194	26,400 ± 360	Mollusc	IX	AA-31761	>37,800 ±	Foraminifera	IX	Beta-63443	70 ± 50	Wood	VIII
AA-29195	9,490 ± 70	Mollusc	IX	AA-31763	13,440 ± 190	Foraminifera	IX	Beta-63444	300 ± 70	Wood twigs	VIII
AA-29196	290 ± 65	Mollusc	IX	AA-31764	>25,900 ±	Foraminifera	IX	Beta-63445	170 ± 90	Wood	VIII
AA-29197	725 ± 85	Foraminifera	IX	AA-31765	>30,500 ±	Foraminifera	IX	Beta-63446	510 ± 50	Charcoal	VIII
AA-29198	850 ± 85	Foraminifera	IX	AA-31766	3,690 ± 70	Foraminifera	IX	Beta-70916	1,500 ± 90	Charcoal	VIII
AA-29199	10,520 ± 110	Mollusc	IX	AA-31767	13,385 ± 90	Mollusc	IX	Beta-70917	1,800 ± 60	Wood twigs	VIII
AA-29200	14,680 ± 170	Foraminifera	IX	AA-31768	34,600 ± 640	Foraminifera	IX	Beta-70918	1,970 ± 70	Wood twigs	VIII
AA-29201	12,630 ± 80	Bryozoa	IX	AA-31769	35,970 ± 790	Foraminifera	IX	Beta-70919	1,710 ± 80	Wood	VIII
AA-29202	13,690 ± 230	Foraminifera	IX	AA-31770	770 ± 65	Foraminifera	IX	Beta-70920	1,470 ± 50	Wood twigs	VIII
AA-29203	13,356 ± 108	Foraminifera	IX	AA-31771	5,705 ± 65	Foraminifera	IX	Beta-71712	600 ± 60	Wood	VIII
AA-29204	13,830 ± 270	Foraminifera	IX	AA-31772	9,695 ± 95	Foraminifera	IX	Beta-71713	240 ± 70	Wood	VIII
AA-29205	11,380 ± 80	Foraminifera	IX	AA-31773	10,460 ± 120	Foraminifera	IX	Beta-71831	260 ± 70	Wood	VIII
AA-29206	1005 ± 55	Mollusc	IX	AA-31774	10,950 ± 140	Foraminifera	IX	Beta-72890	2,060 ± 40	Mollusc	VIII
AA-29207	4050 ± 110	Mollusc	IX	AA-31775	475 ± 65	Foraminifera	IX	Beta-72891	1,700 ± 60	Mollusc	VIII
AA-29208	4900 ± 65	Mollusc	IX	AA-33011	9,650 ± 110	Foraminifera	IX	Beta-72892	1,180 ± 50	Mollusc	VIII
AA-29209	7,630 ± 190	Foraminifera	IX	AA-33012	10,090 ± 120	Foraminifera	IX	Beta-75310	1,280 ± 60	Mollusc	VIII
AA-29210	2,980 ± 55	Mollusc	IX	AA-33013	10,580 ± 95	Foraminifera	IX	Beta-75311	1,380 ± 90	Mollusc	VIII
AA-29211	10,745 ± 75	Foraminifera	IX	AA-33408	35,900 ± 740		IX	Beta-75312	890 ± 80	Mollusc	VIII
AA-29212	8,635 ± 80	Foraminifera	IX	AA-33409	>41,200 ±		IX	Beta-78138	4,070 ± 50	Mollusc	VIII
AA-29213	12,460 ± 75	Foraminifera	IX	AA-33410	>40,600 ±		IX	Beta-78139	3,140 ± 60	Mollusc	VIII
AA-29214	15,380 ± 130	Foraminifera	IX	AA-33631	4,500 ± 80	Foraminifera	IX	Beta-78140	3,340 ± 60	Mollusc	VIII
AA-29215	25,530 ± 250	Foraminifera	IX	AA-33632	6,290 ± 100	Foraminifera	IX	Beta-78141	2,850 ± 60	Mollusc	VIII
AA-29216	31,430 ± 530	Foraminifera	IX	AA-33633	8,520 ± 110	Foraminifera	IX				
AA-29217	40,200 ± 2600	Foraminifera	IX	AA-33842	13,155 ± 95	Foraminifera	IX	BGS-267	970 ± 80	Soil	III
AA-29218	12,355 ± 95	Foraminifera	IX	AA-34400	13,100 ± 130	Foraminifera	IX	BGS-268	1,500 ± 80	Soil	III
AA-29219	12,890 ± 90	Foraminifera	IX	AA-34401	9,040 ± 110	Foraminifera	IX	BGS-269	2,450 ± 90	Organic mud	III
AA-29220	565 ± 75	Foraminifera	IX	AA-34402	9,580 ± 100	Foraminifera	IX	BGS-270	1,810 ± 90	>125 µm org	III
AA-31234	1,450 ± 65	Foraminifera	IX	AA-34403	23,570 ± 340	Foraminifera	IX	BGS-271	3,260 ± 100	Soil	III
AA-31235	8,415 ± 65	Foraminifera	IX	AA-34404	280 ± 60	Foraminifera	IX	BGS-272	890 ± 90	>125 µm org	III
AA-31236	9,815 ± 70	Foraminifera	IX	AA-34405	6,810 ± 80	Mollusc	IX	BGS-295	150 ± 100	Bulk Sed	III
AA-31237	8,120 ± 60	Foraminifera	IX	AA-34406	11,560 ± 170	Foraminifera	IX	BGS-304	33,640 ± 1300	Mollusc	III
AA-31239	15,140 ± 110	Mollusc	IX	AA-34407	19,280 ± 420	Foraminifera	IX	BGS-305	38,470 ± 2450	Mollusc	III
AA-31240	17,230 ± 120	Foraminifera	IX	AA-34408	31,900 ± 1,700	Foraminifera	IX	BGS-306	40,710 ± 5500	Mollusc	III
AA-31241	16,710 ± 110	Mollusc	IX	AAR-3515	9,060 ± 70	Foraminifera	IX	BGS-1472	9,500 ± 150	Gyttja	VIII
AA-31242	10,590 ± 70	Foraminifera	IX	AAR-3516	11,450 ± 130	Foraminifera	IX				
AA-31243	13,735 ± 85	Foraminifera	IX	AAR-3517	15,690 ± 110	Foraminifera	IX	BIRM-370	1,480 ± 160	Peat	III
AA-31244	13,085 ± 85	Foraminifera	IX	AAR-3518	27,530 ± 300	Foraminifera	IX	BIRM-380	2,500 ± 170	Peat	III
AA-31245	15,520 ± 120	Foraminifera	IX	AAR-3706	10,570 ± 110	Foraminifera	IX	BIRM-535	1,970 ± 200	Peat	III
AA-31246	18,820 ± 160	Foraminifera	IX	AAR-3707	12,250 ± 120	Foraminifera	IX	BIRM-536	2,240 ± 190	Peat	III
AA-31247	21,410 ± 160	Foraminifera	IX	AAR-3708	2,805 ± 60	Foraminifera	IX				
AA-31248	9,560 ± 65	Foraminifera	IX	AAR-3709	5,590 ± 65	Foraminifera	IX	Brookhaven	792 ± 107	Iron	VIII
AA-31249	12,560 ± 85	Foraminifera	IX	AAR-3710	8,360 ± 80	Foraminifera	IX	Brookhaven	679 ± 133	Iron	VIII
AA-31250	24,290 ± 240	Foraminifera	IX	AAR-3886	6,440 ± 80	Foraminifera	IX				
AA-31251	7,265 ± 70	Foraminifera	IX	AAR-3887	42,600 ± 3050	Foraminifera	IX	CAMS-4061	5,390 ± 70	Decalcif Sed	VIII
AA-31252	9,290 ± 80	Foraminifera	IX	AAR-3888	9,720 ± 110	Foraminifera	IX	CAMS-4062	23,390 ± 240	Decalcif Sed	VIII
AA-31254	9,005 ± 70	Foraminifera	IX	AAR-4204	3,840 ± 35	Mollusc	IX	CAMS-4063	19,400 ± 310	Decalcif Sed	VIII
AA-31255	9,890 ± 65	Foraminifera	IX	AAR-4205	3,885 ± 35	Mollusc	IX	CAMS-7789	3,040 ± 70	Decalcif Sed	VIII
AA-31256	10,720 ± 70	Foraminifera	IX	AAR-4206	4,145 ± 50	Mollusc	IX	CAMS-7790	7,470 ± 70	Decalcif Sed	VIII
AA-31257	10,480 ± 260	Foraminifera	IX	AAR-4207	3,950 ± 45	Mollusc	IX	CAMS-8251	8,390 ± 80	Decalcif Sed	VIII
AA-31258	11,870 ± 110	Foraminifera	IX	AAR-4208	7,170 ± 70	Mollusc	IX	CAMS-8252	2,660 ± 70	Decalcif Sed	VIII
AA-31259	12,260 ± 100	Foraminifera	IX	AAR-4209	12,270 ± 100	Foraminifera	IX	CAMS-8253	4,750 ± 70	Decalcif Sed	VIII
AA-31260	14660 ± 120	Foraminifera	IX	AAR-4475	1,525 ± 45	Foraminifera	IX	CAMS-10359	8,240 ± 150	Foraminifera	VIII
AA-31261	11,210 ± 330	Foraminifera	IX	AAR-4476	3,520 ± 90	Foraminifera	IX	CAMS-11121	12,860 ± 90	Plant Macros	VIII
AA-31262	16,210 ± 170	Foraminifera	IX	AAR-4477	10,130 ± 140	Foraminifera	IX	CAMS-11122	8,890 ± 70	Plant Macros	VIII
AA-31263	1,800 ± 200	Foraminifera	IX	AAR-4478	8,490 ± 90	Foraminifera	IX	CAMS-11125	8,380 ± 60	Plant Macros	VIII
AA-31264	1,965 ± 60	Foraminifera	IX	AAR-4479	2,130 ± 75	Foraminifera	IX	CAMS-11335	Modern	Plant Macros	VIII

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
CAMS-11340	18,730 ± 90	Plant Macros	VIII	DIC-333	2,980 ± 190	>125 µm org	III	Gif-3864	980 ± 80	Peat	IV
CAMS-11793	10,730 ± 80	Decalcif Sed	VIII	DIC-334	7,610 ± 65	Mollusc	III	Gif-3865	2,660 ± 90	Peat	IV
CAMS-11798	6,330 ± 80	Decalcif Sed	VIII	DIC-335	5,710 ± 80	Mollusc	III	Gif-3866	5,370 ± 130	Organics	IV
CAMS-11814	6,120 ± 80	Mollusc	VIII	DIC-374	9,480 ± 165	Organic lense	III	Gif-3956	3,170 ± 100	Moss	IV
CAMS-11815	9,710 ± 60	Mollusc	VIII	DIC-375	8,610 ± 185	Moss	III	Gif-4243	2,680 ± 90	Soil org	IV
CAMS-12256	17,330 ± 1200	Plant Macros	VIII	DIC-378	4,260 ± 475	Peat	III	Gif-4245	880 ± 80	Soil	A
CAMS-12581	12,640 ± 80	Decalcif Sed	VIII	DIC-390	1,500 ± 85	>125 µm org	III				
CAMS-12582	22,360 ± 140	Decalcif Sed	VIII	DIC-401	850 ± 75	Bulk Sed	III	GSC-122	10,940 ± 240	Fine org	A
CAMS-13511	2,840 ± 60	Mollusc	VIII	DIC-402	3,070 ± 75	>125 µm org	III	GSC-209	>39,600	Wood	A
CAMS-17146	8,640 ± 500	Foraminifera	VIII	DIC-515	2,470 ± 390	>125 µm org	IV	GSC-259	>36,900	Woody peat	A
CAMS-17398	11,060 ± 70	Foraminifera	VIII	DIC-597	3,830 ± 75	Soil org	IV	GSC-328	6,410 ± 150	Mollusc	A
CAMS-17399	3,740 ± 60	Foraminifera	VIII	DIC-648	2,830 ± 235	Peat	IV	GSC-427	>34,800	Peat	A
CAMS-17400	17,990 ± 110	Foraminifera	VIII	DIC-649	2,730 + 1290 -15	Peat	I	GSC-528	30,320 ± 820	Mollusc	A
CAMS-17401	10,500 ± 110	Mixed	VIII					GSC-556	7,740 ± 140	Mollusc	A
CAMS-18449	9,440 ± 110	Foraminifera	VIII	GaK-2566	7,950 ± 170	Mollusc	I	GSC-557	4,000 ± 140	Mollusc	A
CAMS-18687	5,090 ± 60	Foraminifera	VIII	GaK-2567	29,000 ± 3500	Mollusc	I	GSC-564	3,100 ± 150	Mollusc	A
CAMS-18688	8,920 ± 60	Foraminifera	VIII	GaK-2568	29,000 + 2000 -22	Mollusc	I	GSC-583	2,770 ± 140	Mollusc	A
CAMS-18689	11,070 ± 60	Mixed	VIII	GaK-2569	>29,000	Mollusc	I	GSC-584	3,450 ± 170	Plant debris	A
CAMS-18690	8,670 ± 60	Mollusc	VIII	GaK-2570	>29,000	Mollusc	I	GSC-599	7,000 ± 150	Mollusc	A
CAMS-19255	33,320 ± 1810	Mixed	VIII	GaK-2571	90 ± 320	Mollusc	I	GSC-630	8,000 ± 150	Mollusc	A
CAMS-19996	14,370 ± 180	Mixed	VIII	GaK-2572	>20,000	Mollusc	I	GSC-631	6,220 ± 140	Mollusc	A
CAMS-22022	27,670 ± 440	Mixed	VIII	GaK-2573	9,850 ± 250	Mollusc	I	GSC-633	6,270 ± 150	Mollusc	A
CAMS-22023	8,990 ± 80	Mixed	VIII	GaK-2574	10,000 ± 1000	Mollusc	I	GSC-654	2,780 ± 140	Mollusc	A
CAMS-23553	3930 ± 60	Foraminifera	IX	GaK-2575	1,670 ± 90	Peat	I	GSC-707	9,180 ± 1140	Mollusc	A
CAMS-25670	3,970 ± 60	Foraminifera	VIII	GaK-2771	2,090 ± 100	Peat	I	GSC-739	6,930 ± 150	Mollusc	I
CAMS-25758	8,640 ± 70	Mixed	VIII	GaK-2792	730 ± 70	Peat	I	GSC-1507	3,570 ± 140	Peat	I
CAMS-25759	820 ± 80	Foraminifera	VIII	GaK-2799	28,200 ± 1500	Mollusc	I	GSC-1638	8,410 ± 340	Mollusc	II
CAMS-25761	9,060 ± 60	Foraminifera	VIII	GaK-2983	350 ± 100	Peat	I	GSC-1845	1,130 ± 80	Plant frags	II
CAMS-25762	8,030 ± 60	Foraminifera	VIII	GaK-3090	8,230 ± 160	Mollusc	I	GSC-1969	9,100 ± 140	Marine algae	II
CAMS-25763	4,110 ± 80	Foraminifera	VIII	GaK-3091	4,950 ± 140	Mollusc	I	GSC-2001	8,690 ± 90	Mollusc	II
CAMS-25764	9,430 ± 50	Mollusc	VIII	GaK-3092	8,290 ± 170	Mollusc	I	GSC-2008	Modern ± 140	Wood	III
CAMS-27576	17,090 ± 150	Foraminifera	IX	GaK-3093	7,870 ± 150	Mollusc	I	GSC-2083	8,480 ± 270	Mollusc	III
CAMS-27577	20,320 ± 110	Foraminifera	IX	GaK-3094	850 ± 110	Peat	I	GSC-2084	1,790 ± 80	Soil	III
CAMS-28664	10,030 ± 80	Foraminifera	IX	GaK-3096	930 ± 100	Buried soil	I	GSC-2103	5,550 ± 0	Mollusc	III
CAMS-29871	5,660 ± 60	Foraminifera	IX	GaK-3097	160 ± 80	Peat	I	GSC-2111	7,770 ± 100	Mollusc	III
CAMS-32045	12,900 ± 50	Foraminifera	IX	GaK-3098	680 ± 90	Peat	I	GSC-2138	5,800 ± 70	Mollusc	III
CAMS-32046	12,040 ± 80	Bivalve	IX	GaK-3099	330 ± 90	Moss	I	GSC-2175	6,510 ± 70	Wood frags	III
CAMS-32047	9,800 ± 60	Foraminifera	IX	GaK-3100	Modern ± 90	Lichen	I	GSC-2183	8,660 ± 110	Mollusc	IV
CAMS-32669	5440 ± 80	Mollusc	IX	GaK-3101	770 ± 70	Bone	I	GSC-2199	5,340 ± 170	Mollusc	III
CAMS-32670	1980 ± 70	Mollusc	IX	GaK-3160	1,260 ± 150	Buried soil	I	GSC-2201	9,880 ± 200	Moss	III
CAMS-42012	36,050 ± 560	Foraminifera	IX	GaK-3365	7,100 ± 140	Mollusc	I	GSC-2211	6,120 ± 90	Mollusc	III
CAMS-42013	13,680 ± 70	Mollusc	IX	GaK-3677	7,950 ± 140	Mollusc	I	GSC-2215	9,110 ± 160	Mollusc	III
CAMS-44857	18,090 ± 80	Foraminifera	IX	GaK-3678	7,560 ± 130	Mollusc	I	GSC-2258	6,060 ± 170	Mollusc	III
CAMS-44858	18,240 ± 80	Foraminifera	IX	GaK-3685	1,480 ± 110	Leaves	I	GSC-2283	8,290 ± 90	Mollusc	IV
CAMS-44859	31,320 ± 380	Foraminifera	IX	GaK-3686	1,170 ± 330	Soil	I	GSC-2384	8,730 ± 120	Mollusc	IV
CAMS-44860	10,730 ± 100	Foraminifera	IX	GaK-3687	1,480 ± 110	>125 µm org	I	GSC-2466	8,660 ± 160	Mollusc	IV
CAMS-44861	12,280 ± 50	Mollusc	IX	GaK-3722	680 ± 80	Bone	I	GSC-2474	3,010 ± 80	Mollusc	IV
CAMS-44862	9,140 ± 50	Mollusc	IX	GaK-3723	5,200 ± 100	Mollusc	I	GSC-2478	8,680 ± 140	Mollusc	IV
CAMS-44863	4,680 ± 50	Mollusc	IX	GaK-3724	4,810 ± 110	Mollusc	I	GSC-2479	9,280 ± 120	Mollusc	IV
CAMS-44864	9,420 ± 60	Foraminifera	IX	GaK-3725	1,010 ± 100	Organics	I	GSC-2506	8,320 ± 140	Mollusc	IV
CAMS-44865	14940 ± 70	Foraminifera	IX	GaK-3726	450 ± 130	Organics	II	GSC-2508	8,750 ± 100	Mollusc	IV
CAMS-44866	23870 ± 160	Foraminifera	IX	GaK-3860	840 ± 110	Organics	II	GSC-2568	8,890 ± 100	Mollusc	IV
CAMS-44867	16190 ± 70	Foraminifera	IX	GaK-3861	Modern	Organic mat	II	GSC-2582	9,240 ± 80	Mollusc	IV
CAMS-44868	11270 ± 60	Foraminifera	IX	GaK-3862	8,440 ± 150	Mollusc	II	GSC-2618	9,230 ± 100	Mollusc	IV
CAMS-44869	9,430 ± 50	Foraminifera	IX	GaK-4306	6,150 ± 250	Mollusc	II	GSC-2684	8,580 ± 120	Seaweed	IV
CAMS-44870	4,560 ± 50	Foraminifera	IX	GaK-4307	1,290 ± 100	Buried soil	II	GSC-2716	>38,000	Seaweed	IV
CAMS-44871	10,370 ± 60	Foraminifera	IX	GaK-4308	1,610 ± 120	Buried soil	II	GSC-2725	10,100 ± 110	Mollusc	IV
CAMS-44872	7,540 ± 40	Mollusc	IX	GaK-4309	1,070 ± 90	Organics	II	GSC-2731	9,600 ± 100	Peat	IV
CAMS-46520	1,460 ± 50	Mollusc	IX	GaK-4440	5,750 ± 110	Mollusc	II	GSC-2750	9,510 ± 90	Mollusc	IV
CAMS-46521	1,230 ± 50	Mollusc	IX	GaK-4835	120 ± 70	Moss	II	GSC-2752	9,960 ± 230	Mollusc	V
CAMS-46522	1,970 ± 50	Mollusc	IX	GaK-4836	5,250 ± 105	Buried peat	II	GSC-2771	7,380 ± 220	Mollusc	V
CAMS-46523	2,660 ± 50	Mollusc	IX	GaK-4837	7,990 ± 170	Mollusc	II	GSC-2778	10,200 ± 210	Mollusc	V
CAMS-46524	2,060 ± 50	Foraminifera	IX	GaK-4838	Modern	Peat	II	GSC-2797	>39,000	Mollusc	V
CAMS-46525	13,460 ± 70	Foraminifera	IX	GaK-4839	970 ± 70	Organics	II	GSC-2813	10,000 ± 200	Mollusc	V
CAMS-46526	14,530 ± 90	Foraminifera	IX	GaK-4840	Modern ± 70	Peaty sand	II	GSC-2982	8,950 ± 160	Mollusc	V
CAMS-46527	15,720 ± 70	Foraminifera	IX	GaK-5251	5,550 ± 120	<125 µm org	II	GSC-2991	8,790 ± 380	Mollusc	V
CAMS-46528	2,980 ± 50	Foraminifera	IX	GaK-5282	650 ± 140	>125 µm org	III	GSC-3015	8,480 ± 280	Mollusc	V
CAMS-46529	1,200 ± 50	Foraminifera	IX	GaK-5282	650 ± 230	Peaty sand	III	GSC-3157	8,690 ± 120	Mollusc	V
CAMS-46530	1,970 ± 60	Foraminifera	IX	GaK-5411	2,060 ± 85	>125 µm org	III	GSC-3404	8,220 ± 90	Mollusc	A
CAMS-46531	610 ± 60	Foraminifera	IX	GaK-5411	1,990 ± 180	>125 µm org	III	GSC-3404	8,240 ± 90	Mollusc	VI
CAMS-50405	14,030 ± 70	Foraminifera	IX	GaK-5449	640 ± 155	>125 µm org	III	GSC-3468	8,660 ± 110	Mollusc	VI
				GaK-5450	960 ± 200	>125 µm org	III	GSC-3469	8,580 ± 150	Mollusc	VI
DIC-327	850 ± 65	>125 µm org	III	GaK-5479	8,980 ± 180	Mollusc	III	GSC-3603	8,030 ± 80	Mollusc	VI
DIC-328	3,840 ± 55	>125 µm org	III					GSC-3648	8,600 ± 110	Mollusc	VI
DIC-331	Modern	Bulk Sed	III	Gif-3493	1,870 ± 90	Peat	III	GSC-3666	8,590 ± 100	Mollusc	VI
DIC-332	8,650 ± 80	Mollusc	III	Gif-3494	2,660 ± 100	Peat	IV	GSC-3951	8,640 ± 100	Mollusc	VI

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
GSC-3991	7,200 ± 80	Wood	VI	GX-8240	>34,200	Mollusc	V	GX-13794	8,770 ± 260	Peat	VII
GSC-4038	7,350 ± 90	Mollusc	VI	GX-8241	>28,200	Mollusc	V	GX-13795	7,685 ± 260	Peat	VII
GSC-4152	5,780 ± 80	Mollusc	VI	GX-8380	955 ± 130	Peaty sand	V	GX-13796	9,715 ± 295	Bulk Sed	VII
GSC-4162	6,920 ± 90	Mollusc	VI	GX-8381	475 ± 125	Organics	V	GX-13797	10,595 ± 380	Bulk Sed	VII
GSC-4578	8,210 ± 180	Mollusc	VI	GX-8382	420 ± 125	Peaty sands	V	GX-13798	12,720 ± 670	Bulk Sed	VII
GSC-4602	8,680 ± 110	Mollusc	VI	GX-8383	905 ± 130	Peaty sands	V	GX-13799	6,770 ± 205	Bulk Sed	VII
GSC-4607	8,810 ± 90	Mollusc	VI	GX-8384	1,345 ± 135	Peaty sands	V	GX-13800	8,460 ± 245	Bulk Sed	VII
GSC-4948	10,200 ± 160	Mollusc	VII	GX-8385	2,575 ± 140	Peaty sands	V	GX-13801	7,730 ± 180	Bulk Sed	VII
GSC-5036	10,400 ± 90	Mollusc	VII	GX-8504	6,935 ± 220	Colloid mud	V	GX-13805	5,420 ± 100	Mollusc	VI
GSC-5037	10,200 ± 100	Mollusc	VII	GX-8591	>32,500	Mollusc	V	GX-15278	10,920 ± 160	Mollusc	VII
GSC-5122	670 ± 70	Peat	VII	GX-8607	3,915 ± 165	Colloid mud	V	GX-15279	10,720 ± 140	Mollusc	VII
GSC-5149	9,410 ± 100	Mollusc	VII	GX-8608	6,220 ± 220	Colloid mud	V	GX-16635	30,600 ± 1900	Organic Conc	VII
GSC-5163	8,690 ± 90	Mollusc	VII	GX-8670	9,735 ± 295	Mollusc	VIII				
GSC-5223	8,600 ± 160	Mollusc	VII	GX-8671	8,845 ± 265	Mollusc	V	I-405	6,050 ± 250	Mollusc	A
GSC-5299	9,550 ± 320	Mollusc	VII	GX-8751	9,480 ± 565	>125 µm org	V	I-406	6,725 ± 250	Mollusc	A
GSC-5320	9,250 ± 200	Mollusc	VII	GX-8753	9,570 ± 370	>125 µm org	V	I-407	4,375 ± 200	Mollusc	A
GSC-5328	10,400 ± 140	Mollusc	VII	GX-8754	10,915 ± 600	>125 µm org	V	I-484	4,025 ± 190	Mollusc	A
GSC-5340	9,980 ± 210	Mollusc	VII	GX-8755	8,285 ± 285	>125 µm org	V	I-485	4,000 ± 180	Mollusc	A
GSC-5478	10,500 ± 110	Gyttja	VIII	GX-8756	12,035 ± 600	>125 µm org	V	I-486	5,750 ± 250	Mollusc	A
GSC-5483	8,870 ± 100	Gyttja	VIII	GX-8825	2,400 ± 140	Necron mud	V	I-487	4,700 ± 210	Mollusc	A
GSC-5486	9,370 ± 90	Gyttja	VIII	GX-8826	2,745 ± 160	Fine org	V	I-489	2,050 ± 70	Mollusc	A
GSC-5492	6,980 ± 110	Gyttja	VIII	GX-8897	3,420 ± 160	Organic mud	V	I-724	8,350 ± 300	Mollusc	A
GSC-5496	3,220 ± 110	Gyttja	VIII	GX-8898	4,150 ± 170	Colloid mud	V	I-725	17,800 ± 500	Mollusc	A
GSC-5497	>38,000	Gyttja	VIII	GX-8899	1,940 ± 150	>125 µm org	V	I-731	24,600 ± 500	Woody peat	A
GSC-5526	7,690 ± 90	Mollusc	VIII	GX-8939	2,225 ± 155	Silty mud	V	I-839	30,000 ± 1200	Peat	A
GSC-5677	7,540 ± 130	Mollusc	VIII	GX-8940	4,240 ± 185	Colloid mud	V	I-1204	330 ± 75	Moss	A
GSC-5688	7,380 ± 200	Mollusc	VIII	GX-8941	3,650 ± 180	Silty mud	A	I-1233	14,400 ± 400	Detrital org	A
GSC-5699	7,710 ± 190	Mollusc	VIII	GX-8942	>37,000	Mollusc	VIII	I-1234	>35,000	Plant Macros	A
GSC-5895	8,860 ± 110	Mollusc	VIII	GX-8943	9,385 ± 280	Mollusc	VI	I-1235	>40,000	Leaves	A
GSC-5903	7,080 ± 120	Mollusc	VIII	GX-9030	16,849 ± 860	peaty sand	VI	I-1238	5,070 ± 200	Mollusc	A
GSC-6416	7,720 ± 100	Mollusc	VI	GX-9290	8,645 ± 315	Mollusc	VI	I-1240	>35,000	Plant Macros	A
				GX-9291	9,785 ± 525	Mollusc	VI	I-1241	>30,000	Peat	A
GX-930	8,435 ± 105	Mollusc	I	GX-9293	9,110 ± 470	Mollusc	VI	I-1242	19,000 ± 1000	Mollusc	A
GX-1675	>29,000	Mollusc	I	GX-9302	8,635 ± 565	peaty sand	VI	I-1243	5,560 ± 250	Mollusc	A
GX-1676	5,120 ± 400	Mollusc	I	GX-9304	14,185 ± 760	peaty sand	VI	I-1244	5,070 ± 450	Mollusc	A
GX-1677	>28,000	Mollusc	I	GX-9324	15,650 ± 1880	<125 µm org	VI	I-1245	4,875 ± 350	Mollusc	A
GX-1681	Modern	Peat	I	GX-9328	9,060 ± 330	Mollusc	VI	I-1246	7,930 ± 300	Mollusc	A
GX-1812	1,205 ± 120	Peat	I	GX-9430	7,900 ± 225	<125 µm org	VI	I-1247	3,550 ± 200	Plant Macros	A
GX-1824	5,330 ± 450	Mollusc	II	GX-9431	12,350 ± 950	<125 µm org	VI	I-1314	18,700 ± 1200	Mollusc	A
GX-3271	2,080 ± 190	Buried soil	II	GX-9432	11,365 ± 365	<125 µm org	VI	I-1315	9,360 ± 230	Peat	A
GX-3272	2,660 ± 230	Organics	IV	GX-9433	22,720 + 1420 -12	<125 µm org	VI	I-1316	8,250 ± 750	Mollusc	A
GX-5318	>24,550	>125 µm org	IV	GX-9434	10,430 ± 1250	<125 µm org	VI	I-1317	3,600 ± 480	Mollusc	A
GX-5319	14,435 ± 450	>125 µm org	IV	GX-9685	Modern	peaty sand	VI	I-1318	4,400 ± 490	Mollusc	A
GX-5527	2,290 ± 170	>125 µm org	IV	GX-9686	5,075 ± 210	peaty sand	VI	I-1319	5,710 ± 200	Mollusc	A
GX-5623	8,815 ± 275	>125 µm org	V	GX-9766	9,310 ± 220	Mollusc	VI	I-1320	4,010 ± 440	Mollusc	A
GX-5624	7,220 ± 250	>125 µm org	IV	GX-9865	8,010 ± 255	Mollusc	VI	I-1321	5,390 ± 150	Mollusc	A
GX-5625	4,765 ± 200	>125 µm org	IV	GX-9866	7,250 ± 240	Mollusc	VI	I-1553	7,500 ± 200	Mollusc	A
GX-5777	770 ± 135	>125 µm org	IV	GX-9867	3,295 ± 185	Mollusc	VI	I-1554	7,030 ± 190	Mollusc	A
GX-5778	1,900 ± 110	>125 µm org	IV	GX-9889	Modern	Mollusc	VI	I-1555	2,800 ± 140	Mollusc	A
GX-5779	1,865 ± 115	>125 µm org	IV	GX-9890	Modern	Mollusc	VI	I-1556	6,240 ± 140	Mollusc	A
GX-5780	2,215 ± 105	>125 µm org	IV	GX-9918	Modern	Mollusc	VI	I-1596	6,150 ± 170	Mollusc	A
GX-5781	3,030 ± 170	>125 µm org	V	GX-9996	7,850 ± 290	Mollusc	VI	I-1597	4,090 ± 150	Mollusc	A
GX-6280	11,770 ± 550	Mollusc	V	GX-9xxx	4,295 ± 100	<125 µm org	VI	I-1598	7,200 ± 150	Mollusc	A
GX-6292	2,565 ± 190	Detrital org	V	GX-10081	6,885 ± 250	Mollusc	VI	I-1599	2,990 ± 140	Mollusc	A
GX-6293	5,700 ± 240	Detrital org	V	GX-10107	9,380 ± 260	Mollusc	VI	I-1600	3,520 ± 230	Mollusc	A
GX-6352	10,685 ± 385	>125 µm org	V	GX-10290	7,830 ± 230	peaty sand	VI	I-1601	3,530 ± 130	Mollusc	A
GX-6371	1,775 ± 210	Organic lense	V	GX-10374	1,230 ± 110	Coarse org	VI	I-1602	7,900 ± 210	Mollusc	A
GX-6603	7,285 ± 200	Mollusc	V	GX-10628	15,810 ± 490	peaty sand	VI	I-1603	170 ± 105	Plant Macros	A
GX-6607	7,105 ± 720	>125 µm org	V	GX-10858	6,000 ± 165	Mollusc	VI	I-1668	3,830 ± 140	Mollusc	A
GX-6608	16,360 ± 650	>125 µm org	V	GX-10859	5,330 ± 100	Mollusc	VI	I-1669	4,770 ± 140	Mollusc	A
GX-6835	3,430 ± 135	Moss	V	GX-10860	7,230 ± 120	Mollusc	VI	I-1670	4,770 ± 140	Mollusc	A
GX-6836	4,190 ± 140	Moss	V	GX-10861	5,865 ± 170	Mollusc	VI	I-1671	4,270 ± 140	Mollusc	A
GX-6837	8,810 ± 205	Moss	V	GX-11335	5,185 ± 425	<125 µm org	VI	I-1672	7,080 ± 170	Mollusc	A
GX-6838	3,650 ± 160	>125 µm org	V	GX-11548	8,170 ± 245	Mollusc	VI	I-1673	7,970 ± 340	Mollusc	A
GX-6839	8,070 ± 250	>125 µm org	V	GX-11549	Modern ± 100	Peat	VI	I-1674	<200	Moss	A
GX-6840	8,000 ± 320	>125 µm org	V	GX-12035	7,370 ± 95	?	VI	I-1812	>39,000	Mollusc	A
GX-7091	4,560 ± 180	>125 µm org	V	GX-12036	6,220 ± 240	Mollusc	VI	I-1813	>39,000	Mollusc	A
GX-7119	11,910 ± 380	>125 µm org	V	GX-12037	7,725 ± 190	Mollusc	VI	I-1814	>39,000	Mollusc	A
GX-7458	17,065 ± 665	>125 µm org	V	GX-12482	Too Small	<125 µm org	VI	I-1815	32,300 + 2100 -1600	Mollusc	A
GX-7880	15,080 ± 620	>125 µm org	V	GX-12852	6,720 ± 390	peaty sand	VI	I-1816	>39,000	Mollusc	A
GX-7881	2,745 ± 145	>125 µm org	V	GX-12858	10,130 ± 180	Mollusc	VI	I-1829	>41,000	Mollusc	A
GX-7882	10,025 ± 225	>125 µm org	V	GX-12859	11,680 ± 130	Mollusc	VI	I-1830	1,950 ± 100	Mollusc	A
GX-7883	27,255 ± 1250	>125 µm org	V	GX-13021	9,420 ± 135	Mollusc	VIII	I-1831	5,570 ± 130	Mollusc	A
GX-8159	8,450 ± 190	Mollusc	V	GX-13022	8,780 ± 230	Mollusc	VIII	I-1832	34,900 + 2100 -1700	Mollusc	A
GX-8160	7,060 ± 175	Mollusc	V	GX-13683	4,180 ± 80	Mollusc	VI	I-1833	5,270 ± 140	Mollusc	A
GX-8194	9,190 ± 195	Mollusc	VI	GX-13720	45,600 + 4100 -27	Mollusc	VI	I-1834	785 ± 105	Peat	A

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
I-1835	1,860 ± 110	Peat	A	QC-661	255 ± 100	Peat	V	SI-2556	3,650 ± 200	>125 µm org	III
I-1931	4,920 ± 180	Mollusc	A	QC-683B	5,490 ± 180	Buried soil	V	SI-2557	2,090 ± 175	>125 µm org	III
I-1932	7,940 ± 130	Mollusc	A	QC-714	8,735 ± 235	Mollusc	VIII	SI-2610	9,550 ± 90	Mollusc	III
I-1933	8,210 ± 130	Mollusc	A	QC-879	8,400 ± 160	Mollusc	V	SI-2611	7,505 ± 100	Organics	III
I-1934	6,560 ± 125	Mollusc	A	QC-880	8,160 ± 145	Mollusc	V	SI-2612	10,095 ± 95	Mollusc	III
I-1983	8,180 ± 130	Mollusc	A	QC-881	7,075 ± 215	Mollusc	V	SI-2613	6,110 ± 170	Mollusc	III
I-2410	6,270 ± 210	Mollusc	A	QC-882	8,140 ± 250	Mollusc	V	SI-2614	11,360 ± 320	Organic lense	III
I-2411	5,380 ± 185	Mollusc	A	QC-883	8,135 ± 210	Mollusc	V	SI-2617	6,835 ± 100	Mollusc	III
I-2412	5,900 ± 130	Mollusc	A	QC-901	7,340 ± 135	Mollusc	V	SI-2618	Modern	Macrofossils	III
I-2413	4,420 ± 110	Mollusc	A	QC-902	7,510 ± 320	Mollusc	V	SI-2620	Modern	Organic sands	III
I-2414	1,360 ± 105	Peat	A	QC-903	9,875 ± 130	Mollusc	V	SI-2621	830 ± 60	Peat	IV
I-2442	4,990 ± 175	Mollusc	A	QC-904	7,985 ± 130	Mollusc	V	SI-2949	2,825 ± 65	Peat	IV
I-2546	4,050 ± 130	Mollusc	A	QC-905	7,800 ± 150	Mollusc	V	SI-2950	3,525 ± 60	Peat	IV
I-2548	5,580 ± 130	Mollusc	A	QC-1052	2,800 ± 95	Peat	V	SI-2951	Modern	Peat	IV
I-2549	5,100 ± 120	Mollusc	A	QC-1137	7,865 ± 250	Mollusc	V	SI-3455	2,575 ± 75	Peat	IV
I-2581	36,250 + 3600 -20	Mollusc	A	QC-1138	7,185 ± 120	Mollusc	III	SI-3456	3,320 ± 80	Peat	IV
I-2582	4,590 ± 115	Mollusc	A					SI-3457	6,320 ± 130	Moss	IV
I-2583	6,130 ± 120	Mollusc	A	QL-60	36,300 ± 300	Mollusc	III	SI-3678	Modern	Mollusc	V
I-2584	4,430 ± 110	Mollusc	A	QL-136	33,600 ± 300	Mollusc	III	SI-4180	7,980 ± 175	Mollusc	V
I-2585	3,850 ± 105	Mollusc	A	QL-177	45,200 ± 800	Mollusc	III	SI-4181	8,820 ± 110	Mollusc	V
I-2586	3,890 ± 107	Mollusc	A	QL-178	45,500 ± 600	Mollusc	III	SI-4368	3,175 ± 150	Fine org	V
I-2611	8,300 ± 135	Mollusc	A	QL-179	45,400 ± 600	Mollusc	III	SI-4752	4,840 ± 200	Colloid mud	V
I-2669	5,190 ± 120	Mollusc	A	QL-180	39,600 ± 500	Mollusc	III	SI-4755	5,825 ± 235	Colloid mud	V
I-2695	6,560 ± 125	Mollusc	IV	QL-181	44,800 ± 500	Mollusc	III	SI-4757	9,595 ± 90	Mollusc	V
I-2831	7,750 ± 135	Mollusc	IV	QL-182	36,000 ± 300	Mollusc	III	SI-5170	9,845 ± 175	Mollusc	V
I-2961	4,830 ± 120	Plant Macros	IV	QL-183	47,700 ± 700	Mollusc	III	SI-5171	9,320 ± 80	Mollusc	VIII
I-2962	6,520 ± 150	Plant Macros	IV	QL-184	40,000 ± 300	Mollusc	III	SI-5172	8,660 ± 175	Mollusc	V
I-3200	32,200 + 1700 -14	Mollusc	A	QL-185	36,600 ± 350	Mollusc	III	SI-5173	7,780 ± 115	Mollusc	I
				QL-186	41,400 ± 500	Mollusc	III	SI-5521	20 ± 65	Charcoal	VIII
NSRL-10184	3,660 ± 55	Mollusc	IX	QL-187	8,210 ± 50	Organics	III	SI-5522	65 ± 60	Charcoal	VIII
NSRL-10673	550 ± 35	Mollusc	IX	QL-188	50,400 ± 1000	Sandy peat	IV	SI-5523	500 ± 35	Charcoal	VIII
NSRL-10674	7,640 ± 45	Mollusc	IX	QL-973	45,800 ± 1000	Mollusc	IV	SI-5525	290 ± 85	Wood	VIII
NSRL-10675	8,920 ± 80	Mollusc	IX	QL-974	44,400 ± 1000	Mollusc	IV	SI-5527	355 ± 45	Charcoal	VIII
NSRL-10676	9,080 ± 50	Mollusc	IX	QL-976-1	2,360 ± 100	Bone	IV	SI-5528	415 ± 50	Wood	VIII
NSRL-10677	1,120 ± 40	Mollusc	IX	QL-976-2	47,000 + 1400 -12	Bone	IV	SI-5758	10,530 ± 110	Mollusc	VI
NSRL-10678	4,670 ± 40	Mollusc	IX	QL-979	37,200 ± 800	Mollusc	IV	SI-5759	10,905 ± 145	Mollusc	VI
NSRL-10679	7,140 ± 65	Mollusc	IX	QL-1086	48,700 + 1400 -10	Peat	IV				
NSRL-10680	800 ± 40	Mollusc	IX	QL-1087	47,500 + 1000 -12	Peat	IV	ST-3816	8,760 ± 350	Mollusc	I
NSRL-10681	2,990 ± 35	Mollusc	IX	QL-1173	10,790 ± 70	Mollusc	IV	ST-3829	1,185 ± 120	Bone	A
NSRL-10776	10,860 ± 160	Mollusc	IX	QL-1174	10,510 ± 70	Mollusc	IV				
NSRL-10785	1,970 ± 60	Mollusc	IX	QL-1179	50,700 + 2000 -16	Organics	IV	TO-293	6,280 ± 50	Mollusc	VIII
NSRL-10786	12,700 ± 110	Mollusc	IX	QL-1180	42,400 ± 800	Fine org	IV	TO-347	970 ± 60	Charcoal	VIII
NSRL -10182	175 ± 65	Gastropod	IX	QL-1181	47,800 + 1300 -11	Mollusc	III	TO-712	1,340 ± 70	Iron	VIII
NSRL -10183	2,620 ± 45	Mollusc	IX					TO-712-2	550 ± 60	Iron	VIII
				QU-240	1,560 ± 120	Bone	III	TO-712-3a	500 ± 60	Iron	VIII
L-762c	5,400 ± 200	Mollusc	IV	QU-241	770 ± 80	Bone	III	TO-748	7,880 ± 70	Mollusc	VIII
				QU-299	6,800 ± 600	Peat	III	TO-749	7,730 ± 70	Mollusc	VIII
QC-446	>41,900	Mollusc	IV					TO-750	8,060 ± 70	Mollusc	VIII
QC-447	9,370 ± 140	Mollusc	IV	S-12	3,670 ± 270	Mollusc	A	TO-751	7,900 ± 70	Mollusc	VIII
QC-448	9,395 ± 100	Mollusc	IV	S-13	5,600 ± 300	Mollusc	I	TO-1860	8,360 ± 70	Mollusc	VIII
QC-449	9,100 ± 100	Mollusc	IV	S-458	>32,000	Mollusc	I	TO-1870	5,930 ± 70	Foraminifera	VIII
QC-450	9,725 ± 120	Mollusc	IV	S-459	24,000 ± 850	Mollusc	II	TO-1871	8,470 ± 90	Foraminifera	VIII
QC-451	9,935 ± 165	Peat	IV					TO-2195	Modern	Plant Macros	VII
QC-452	8,025 ± 110	Peat	IV	SI-1335	46,950 ± 2050	Mollusc	II	TO-2196	52,460 ± 1430	Mollusc	VII
QC-453	9,950 ± 185	Peat	IV	SI-1336	42,700 ± 2250	Mollusc	II	TO-2456	6,630 ± 70	Mollusc	VIII
QC-454	9,092 ± 150	Mollusc	V	SI-1688	190 ± 90	Bone	II	TO-2457	6,850 ± 70	Mollusc	VIII
QC-455	6,215 ± 90	Mollusc	V	SI-1689	2,160 ± 115	Buried org	II	TO-2458	7,260 ± 70	Mollusc	VIII
QC-456	4,310 ± 95	Mollusc	IV	SI-1690	7,365 ± 410	Peaty sands	II	TO-2459	6,760 ± 70	Mollusc	VIII
QC-457	8,050 ± 115	Mollusc	IV	SI-1691	2,355 ± 145	Peaty sands	II	TO-2460	6,880 ± 70	Mollusc	VIII
QC-479	1,510 ± 240	Peat	IV	SI-1692	Modern	Organic sands	II	TO-2461	8,350 ± 80	Mollusc	VIII
QC-480A	10,720 ± 140	Mollusc	IV	SI-1693	660 ± 130	Buried org	II	TO-2462	7,060 ± 70	Mollusc	VIII
QC-480C	10,760 ± 150	Mollusc	IV	SI-1694A	505 ± 155	<125 µm org	II	TO-2463	8,850 ± 90	Mollusc	VIII
QC-501	6,030 ± 80	Peat	IV	SI-1694B	Modern	>125 µm org	II	TO-2464	8,830 ± 80	Mollusc	VIII
QC-513	4,285 ± 90	Mollusc	IV	SI-1695A	180 ± 105	<125 µm org	II	TO-2465	8,570 ± 230	Mollusc	VIII
QC-543	12,150 ± 140	Mollusc	IV	SI-1695B	Modern	>125 µm org	II	TO-2466	8,930 ± 80	Mollusc	VIII
QC-544	9,725 ± 130	Mollusc	V	SI-1696	745 ± 115	Organics	II	TO-2470	8,550 ± 160	Mollusc	VIII
QC-618	1,450 ± 105	Organics	V	SI-1697	370 ± 105	Organic sands	II	TO-2471	8,450 ± 70	Mollusc	VIII
QC-619	4,000 ± 110	Peat	V	SI-1698	Too Small	Peat	II	TO-2472	8,800 ± 70	Mollusc	VIII
QC-653	965 ± 145	Peat	V	SI-1699	4,660 ± 90	Peat	II	TO-2609	210 ± 60	Charcoal	VIII
QU-301	1,170 ± 150	Peat	III	SI-1700	2,015 ± 60	Buried soil	II	TO-3241	37,990 ± 410	Plant Macros	VIII
QU-302	2,120 ± 80	Peaty sand	III	SI-1702A	2,025 ± 105	Buried soil	II	TO-3242	36,120 ± 340	Plant Macros	VIII
QU-303	1,640 ± 130	Peat	III	SI-1702B	365 ± 270	>125 µm org	II	TO-3243	20,110 ± 340	Plant Macros	VIII
QU-304	4,460 ± 210	Peat	III	SI-1703	1,740 ± 70	<125 µm org	III	TO-3263	8,160 ± 150	Foraminifera	VIII
QU-305	830 ± 70	Buried soil	III	SI-2548	Modern	Plant Macros	III	TO-3264	6,960 ± 110	Foraminifera	VIII
QU-307	1,610 ± 230	Peat	III	SI-2549	810 ± 80	Peat	III	TO-3265	8,170 ± 140	Foraminifera	VIII
QU-308	620 ± 210	Peat	A	SI-2550	1,025 ± 100	Moss	III	TO-3266	7,940 ± 920	Foraminifera	VIII
QC-654	3,110 ± 100	Peat	IV	SI-2555	2,570 ± 75	Peat	III	TO-3269	7,230 ± 830	Foraminifera	VIII

Appendix 2A. Continued.

Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL	Lab No.	Reported Date	Material	DL
TO-3270	8,380 ± 510	Foraminifera	VIII	TO-3667	1,300 ± 60	Foraminifera	VIII	Y-1831	3,580 ± 120	Mollusc	A
TO-3271	8,740 ± 280	Foraminifera	VIII	TO-3668	8,110 ± 360	Foraminifera	VIII	Y-1832	9,180 ± 180	Mollusc	A
TO-3272	8,510 ± 110	Foraminifera	VIII	TO-3669	1,330 ± 70	Foraminifera	VIII	Y-1833	7,960 ± 140	Mollusc	A
TO-3273	8,490 ± 270	Foraminifera	VIII					Y-1834	7,820 ± 140	Mollusc	A
TO-3274	9,400 ± 190	Foraminifera	VIII	Y-1702	>50,000	Mollusc	A	Y-1835	7,290 ± 120	Mollusc	A
TO-3664	970 ± 70	Foraminifera	VIII	Y-1703	>54,000	Mollusc	A				
TO-3665	540 ± 60	Foraminifera	VIII	Y-1705	8,190 ± 120	Mollusc	A	?-?	628 ± 150	Charcoal	VIII
TO-3666	7,940 ± 90	Foraminifera	VIII	Y-1830	8,430 ± 140	Mollusc	A				

Date Lists: A, Andrews and Drapier (1967); I, Andrews and Miller (1972); II, Andrews (1975); III, Andrews (1976); IV, Miller (1979); V, Andrews and Short (1983); VI, Andrews et al. (1989); VII, Kaufman and Williams (1992); VIII, (Manley and Jennings, 1996); IX, this date list.

Appendix 2B. Comprehensive Date List, arranged by radiocarbon age, 1967-1999.

Reported Date	Lab No.	Reported Date	Lab No.	Reported Date	Lab No.	Reported Date	Lab No.
Modern	AA-347	470 ± 60	Beta-61073	1005 ± 55	AA-29206	1,800 ± 70	Beta-61071
Modern	AA-2351	475 ± 65	AA-31775	1,010 ± 50	AA-6523	1,810 ± 90	BGS-270
Modern	AA-2352	475 ± 125	GX-8381	1,010 ± 100	GaK-3725	1,860 ± 110	I-1835
Modern	AA-7142	500 ± 35	SI-5523	1,025 ± 100	SI-2550	1,865 ± 115	GX-5779
Modern	DIC-331	500 ± 60	TO-712-3a	1,045 ± 55	AA-6026	1,870 ± 90	Gif-3493
Modern ± 140	GSC-2008	505 ± 155	SI-1694A	1,055 ± 65	AA-13353	1,900 ± 60	AA-31757
Modern	GX-1681	510 ± 80	Beta-42660	1065 ± 45	AA-25284	1,900 ± 110	GX-5778
Modern	GX-9685	510 ± 50	Beta-63446	1,070 ± 90	GaK-4309	1,940 ± 150	GX-8899
Modern	GX-9889	540 ± 60	TO-3665	1,105 ± 65	AA-24836	1,950 ± 100	I-1830
Modern	GX-9890	550 ± 60	TO-712-2	1,120 ± 40	NSRL-10677	1,965 ± 60	AA-31264
Modern	GX-9918	550 ± 35	NSRL-10673	1,125 ± 50	AA-8328	1,970 ± 70	Beta-70918
Modern ± 100	GX-11549	565 ± 75	AA-29220	1,130 ± 80	GSC-1845	1,970 ± 200	BIRM-535
Modern	SI-2951	600 ± 60	Beta-71712	1,130 ± 50	Beta-61609	1,970 ± 50	CAMS-46522
Modern	SI-3678	610 ± 60	CAMS-46531	1,155 ± 56	AA-11871	1,970 ± 60	CAMS-46530
Modern	TO-2195	620 ± 210	QU-308	1,170 ± 330	GaK-3686	1,970 ± 60	NSRL-10785
Modern	AA-14214	628 ± 150	?-?	1,170 ± 150	QU-301	1980 ± 70	CAMS-32670
Modern	CAMS-11335	640 ± 155	GaK-5449	1,180 ± 50	Beta-72892	1,990 ± 180	GaK-5411
Modern ± 90	GaK-3100	650 ± 65	AA-21746	1,185 ± 120	ST-3829	2,015 ± 60	SI-1700
Modern	GaK-3861	650 ± 140	GaK-5282	1,200 ± 50	CAMS-46529	2,025 ± 105	SI-1702A
Modern	GaK-4838	650 ± 230	GaK-5282	1,205 ± 120	GX-1812	2,030 ± 55	AA-21743
Modern ± 70	GaK-4840	660 ± 130	SI-1693	1,230 ± 50	CAMS-46521	2,050 ± 70	I-489
Modern	SI-1692	670 ± 70	GSC-5122	1,230 ± 110	GX-10374	2,060 ± 40	Beta-72890
Modern	SI-1694B	670 ± 150	Beta-52074	1,260 ± 150	GaK-3160	2,060 ± 50	CAMS-46524
Modern	SI-1695B	679 ± 133	Brookhaven	1,280 ± 60	Beta-75310	2,060 ± 85	GaK-5411
Modern	SI-2548	680 ± 90	GaK-3098	1,280 ± 45	AA-14681	2,070 ± 70	AA-7012
Modern	SI-2618	680 ± 80	GaK-3722	1,290 ± 100	GaK-4307	2,070 ± 65	AA-14205
Modern	SI-2620	720 ± 220	AA-2084	1,300 ± 55	AA-6847	2,080 ± 190	GX-3271
5 ± 40	AA-27762	725 ± 85	AA-29197	1,300 ± 60	TO-3667	2,090 ± 100	GaK-2771
20 ± 65	SI-5521	730 ± 70	GaK-2792	1,310 ± 60	AA-10603	2,090 ± 175	SI-2557
60 ± 80	Beta-53643	745 ± 115	SI-1696	1,330 ± 70	TO-3669	2,110 ± 90	Beta-61070
65 ± 60	SI-5522	765 ± 55	AA-21744	1,340 ± 70	TO-712	2,120 ± 80	QU-302
70 ± 50	Beta-63443	770 ± 65	AA-31770	1,345 ± 135	GX-8384	2,130 ± 75	AAR-4479
85 ± 45	AA-11446	770 ± 135	GX-5777	1,360 ± 105	I-2414	2,145 ± 80	AA-936
90 ± 320	GaK-2571	770 ± 80	QU-241	1,380 ± 90	Beta-75311	2,150 ± 40	AA-26518
100 ± 40	AA-17256	770 ± 70	GaK-3101	1,382 ± 65	AA-6830	2,160 ± 115	SI-1689
110 ± 50	Beta-52994	785 ± 105	I-1834	1,390 ± 55	AA-11872	2,180 ± 50	AA-12886
120 ± 70	GaK-4835	792 ± 107	Brookhaven	1,440 ± 70	AA-10567	2,210 ± 50	AA-3098
150 ± 100	BGS-295	800 ± 70	Beta-61068	1,450 ± 60	AA-10565	2,215 ± 105	GX-5780
160 ± 80	GaK-3097	800 ± 40	NSRL-10680	1,450 ± 65	AA-31234	2,215 ± 55	AA-8961
170 ± 105	I-1603	810 ± 80	SI-2549	1,450 ± 105	QC-618	2,225 ± 155	GX-8939
170 ± 90	Beta-63445	815 ± 55	AA-10566	1,460 ± 50	CAMS-46520	2,240 ± 190	BIRM-536
175 ± 65	NSRL-10182	820 ± 80	CAMS-25759	1,465 ± 55	AA-11585	2,290 ± 170	GX-5527
180 ± 105	SI-1695A	830 ± 70	QU-305	1,465 ± 65	AA-18794	2,320 ± 65	AA-29186
190 ± 90	SI-1688	830 ± 60	SI-2621	1,470 ± 50	Beta-70920	2,355 ± 145	SI-1691
210 ± 60	TO-2609	840 ± 110	GaK-3860	1,480 ± 160	BIRM-370	2,360 ± 100	QL-976-1
230 ± 60	Beta-52273	850 ± 85	AA-29198	1,480 ± 110	GaK-3685	2,370 ± 70	AA-3890
240 ± 70	Beta-71713	850 ± 65	DIC-327	1,480 ± 110	GaK-3687	2,400 ± 140	GX-8825
240 ± 80	Beta-53642	850 ± 75	DIC-401	1,490 ± 60	Beta-61072	2,450 ± 90	BGS-269
255 ± 100	QC-661	850 ± 110	GaK-3094	1,500 ± 80	BGS-268	2,470 ± 390	DIC-515
260 ± 70	Beta-71831	855 ± 60	AA-12891	1,500 ± 85	DIC-390	2,480 ± 110	AA-11870
270 ± 60	Beta-52275	860 ± 65	AA-21748	1,500 ± 90	Beta-70916	2,500 ± 170	BIRM-380
280 ± 60	AA-34404	875 ± 50	AA-11449	1,510 ± 240	QC-479	2,565 ± 190	GX-6292
290 ± 65	AA-29196	880 ± 80	Gif-4245	1,525 ± 45	AAR-4475	2,570 ± 75	SI-2555
290 ± 85	SI-5525	880 ± 70	AA-14213	1,560 ± 120	QU-240	2,575 ± 75	SI-3455
300 ± 70	Beta-63444	890 ± 80	Beta-75312	1,575 ± 45	AA-24839	2,575 ± 140	GX-8385
320 ± 90	Beta-42659	890 ± 90	BGS-272	1,610 ± 120	GaK-4308	2,620 ± 45	NSRL-10183
330 ± 90	GaK-3099	895 ± 50	AA-11877	1,610 ± 230	QU-307	2,630 ± 75	AA-24837
330 ± 75	I-1204	905 ± 130	GX-8383	1,640 ± 130	QU-303	2,655 ± 45	AA-10655
350 ± 100	GaK-2983	930 ± 100	GaK-3096	1,670 ± 90	GaK-2575	2,660 ± 70	CAMS-8252
355 ± 45	SI-5527	955 ± 130	GX-8380	1,680 ± 50	AA-12892	2,660 ± 50	CAMS-46523
365 ± 270	SI-1702B	960 ± 200	GaK-5450	1,700 ± 60	Beta-72891	2,660 ± 100	Gif-3494
370 ± 105	SI-1697	965 ± 145	QC-653	1,710 ± 80	Beta-70919	2,660 ± 90	Gif-3865
375 ± 65	AA-3997	970 ± 150	AA-6524	1,732 ± 85	AA-2219	2,660 ± 230	GX-3272
380 ± 80	Beta-52276	970 ± 80	BGS-267	1,740 ± 70	SI-1703	2,680 ± 90	Gif-4243
390 ± 70	Beta-52274	970 ± 60	TO-347	1,745 ± 160	AA-11432	2,730 + 1290 -1540	DIC-649
415 ± 50	SI-5528	970 ± 70	GaK-4839	1,775 ± 210	GX-6371	2,745 ± 145	GX-7881
420 ± 125	GX-8382	970 ± 70	TO-3664	1,790 ± 80	GSC-2084	2,745 ± 160	GX-8826
450 ± 60	Beta-52272	980 ± 80	Gif-3864	1,798 ± 111	AA-8332	2755 ± 45	AA-25277
450 ± 130	GaK-3726	985 ± 50	AA-4338	1,800 ± 60	Beta-70917	2,770 ± 140	GSC-583
460 ± 90	AA-21742	1,000 ± 60	AA-9065	1,800 ± 200	AA-31263	2,780 ± 140	GSC-654

Appendix 2B. Continued.

Reported Date	Lab No.	Reported Date	Lab No.	Reported Date	Lab No.		
2,800 ± 95	QC-1052	3,690 ± 70	AA-31766	4,750 ± 70	CAMS-8253	5,825 ± 235	SI-4755
2,800 ± 140	I-1555	3735 ± 60	AA-27801	4,765 ± 200	GX-5625	5,835 ± 60	AA-4529
2805 ± 50	AA-25279	3,740 ± 60	CAMS-17399	4,770 ± 140	I-1669	5,840 ± 120	AA-9066
2,805 ± 60	AAR-3708	3,810 ± 70	AA-31758	4,770 ± 140	I-1670	5,865 ± 170	GX-10861
2,815 ± 75	AA-21747	3825 ± 50	AA-25282	4,780 ± 80	AA-1801	5,900 ± 130	I-2412
2,819 ± 103	AA-1011	3,830 ± 75	DIC-597	4,794 ± 70	AA-3277	5925 ± 60	AA-21767
2,820 ± 45	AA-21753	3,830 ± 140	I-1668	4,810 ± 110	GaK-3724	5,930 ± 70	TO-1870
2,825 ± 65	SI-2949	3,840 ± 55	DIC-328	4,830 ± 120	I-2961	6,000 ± 165	GX-10858
2,830 ± 235	DIC-648	3,840 ± 35	AAR-4204	4,840 ± 200	SI-4752	6,030 ± 80	QC-501
2,840 ± 60	CAMS-13511	3,850 ± 105	I-2585	4,850 ± 55	AA-8324	6,050 ± 250	I-405
2,850 ± 60	Beta-78141	3,880 ± 65	AA-29185	4,875 ± 350	I-1245	6,060 ± 170	GSC-2258
2,855 ± 80	AA-4336	3,885 ± 35	AAR-4205	4900 ± 65	AA-29208	6,110 ± 170	SI-2613
2,875 ± 95	AA-31265	3,890 ± 107	I-2586	4,905 ± 100	AA-6526	6,120 ± 80	CAMS-11814
2,890 ± 115	AA-1915	3,915 ± 165	GX-8607	4,920 ± 180	I-1931	6,120 ± 90	GSC-2211
2925 ± 45	AA-25278	3,920 ± 60	AA-1917	4950 ± 100	AA-19903	6,130 ± 120	I-2583
2,980 ± 50	CAMS-46528	3930 ± 60	CAMS-23553	4,950 ± 140	GaK-3091	6,150 ± 170	I-1596
2,980 ± 190	DIC-333	3935 ± 110	AA-19906	4,990 ± 175	I-2442	6,150 ± 250	GaK-4306
2,980 ± 55	AA-29210	3940 ± 45	AA-21766	5,070 ± 200	I-1238	6,155 ± 155	AA-3286
2,990 ± 140	I-1599	3,950 ± 45	AAR-4207	5,070 ± 450	I-1244	6,160 ± 90	AA-6029
2,990 ± 35	NSRL-10681	3,970 ± 60	CAMS-25670	5,075 ± 210	GX-9686	6,170 ± 55	AA-3275
3,010 ± 50	AA-5988	3,985 ± 50	AA-27761	5080 ± 60	AA-20740	6180 ± 170	AA-31747
3,010 ± 80	GSC-2474	4,000 ± 140	GSC-557	5,084 ± 70	AA-2276	6,185 ± 55	AA-21745
3,015 ± 55	AA-6027	4,000 ± 180	I-485	5,090 ± 60	CAMS-18687	6,210 ± 55	AA-23218
3025 ± 55	AA-20739	4,000 ± 110	QC-619	5,100 ± 120	I-2549	6,215 ± 90	QC-455
3,030 ± 170	GX-5781	4,010 ± 50	AA-8325	5,120 ± 400	GX-1676	6,220 ± 140	GSC-631
3,040 ± 70	CAMS-7789	4,010 ± 440	I-1320	5,160 ± 60	AA-2631	6,220 ± 240	GX-12036
3,050 ± 80	AA-23219	4,025 ± 55	AA-13244	5,185 ± 425	GX-11335	6,220 ± 130	AA-11433
3,070 ± 75	DIC-402	4,025 ± 190	I-484	5,190 ± 120	I-2669	6,220 ± 220	GX-8608
3085 ± 45	AA-21764	4,040 ± 105	AA-9022	5,200 ± 100	GaK-3723	6,240 ± 140	I-1556
3,085 ± 70	AA-11583	4050 ± 110	AA-29207	5210 ± 510	AA-20731	6250 ± 60	AA-19905
3,100 ± 150	GSC-564	4,050 ± 130	I-2546	5,215 ± 75	AA-14211	6,270 ± 150	GSC-633
3,105 ± 50	AA-14684	4,060 ± 90	AA-1508	5,230 ± 60	AA-6466	6,270 ± 210	I-2410
3,110 ± 100	QC-654	4,060 ± 105	AA-9024	5230 ± 50	AA-21765	6,280 ± 50	TO-293
3,140 ± 60	Beta-78139	4,070 ± 50	Beta-78138	5,250 ± 105	GaK-4836	6,290 ± 100	AA-33632
3,170 ± 100	Gif-3956	4,090 ± 150	I-1597	5,270 ± 140	I-1833	6,320 ± 130	SI-3457
3,175 ± 150	SI-4368	4,110 ± 65	AA-9362	5,300 ± 60	AA-13237	6,330 ± 80	CAMS-11798
3205 ± 60	AA-20745	4,110 ± 80	CAMS-25763	5,330 ± 450	GX-1824	6,380 ± 90	AA-5290
3,210 ± 70	AA-6829	4,145 ± 50	AAR-4206	5,330 ± 100	GX-10859	6,410 ± 150	GSC-328
3,220 ± 110	GSC-5496	4,150 ± 170	GX-8898	5,340 ± 170	GSC-2199	6,440 ± 80	AAR-3886
3,260 ± 100	BGS-271	4,180 ± 80	GX-13683	5,370 ± 130	Gif-3866	6,510 ± 70	GSC-2175
3,285 ± 55	AA-3273	4,190 ± 140	GX-6836	5,380 ± 185	I-2411	6520 ± 55	AA-25275
3,295 ± 185	GX-9867	4,205 ± 50	AA-3101	5,390 ± 70	CAMS-4061	6,520 ± 150	I-2962
3,295 ± 70	AA-24838	4,205 ± 50	AA-3101	5,390 ± 150	I-1321	6,560 ± 125	I-1934
3,320 ± 80	SI-3456	4,205 ± 50	AA-3101	5,400 ± 200	L-762c	6,560 ± 125	I-2695
3335 ± 100	AA-19907	4,240 ± 185	GX-8940	5,420 ± 100	GX-13805	6565 ± 60	AA-25274
3,340 ± 60	Beta-78140	4,260 ± 475	DIC-378	5440 ± 80	CAMS-32669	6,615 ± 115	AA-13352
3345 ± 50	AA-25281	4,270 ± 70	AA-27765	5,490 ± 180	QC-683B	6,630 ± 70	TO-2456
3,420 ± 160	GX-8897	4,270 ± 140	I-1671	5,550 ± 120	GaK-5251	6640 ± 110	AA-23408
3,428 ± 70	AA-1005	4,285 ± 90	QC-513	5,550 ± 0	GSC-2103	6,655 ± 65	AA-7898
3,430 ± 135	GX-6835	4,295 ± 100	GX-9xxx	5,560 ± 250	I-1243	6665 ± 55	AA-25276
3,440 ± 50	AA-3108	4,310 ± 95	QC-456	5,570 ± 130	I-1831	6,720 ± 390	GX-12852
3,450 ± 170	GSC-584	4350 ± 75	AA-20738	5,580 ± 130	I-2548	6,725 ± 250	I-406
3,520 ± 230	I-1600	4360 ± 50	AA-21759	5,590 ± 65	AAR-3709	6,755 ± 90	AA-9291
3,520 ± 90	AAR-4476	4,375 ± 200	I-407	5,600 ± 330	AA-712	6,760 ± 70	TO-2459
3,525 ± 60	SI-2950	4,400 ± 490	I-1318	5,600 ± 300	S-13	6,770 ± 205	GX-13799
3,530 ± 130	I-1601	4,420 ± 110	I-2413	5,645 ± 70	AA-27766	6,800 ± 600	QU-299
3,550 ± 200	I-1247	4,430 ± 110	I-2584	5,660 ± 100	AA-7008	6,810 ± 80	AA-34405
3,570 ± 140	GSC-1507	4,440 ± 70	AA-5998	5,660 ± 60	CAMS-29871	6,835 ± 100	SI-2617
3580 ± 50	AA-25280	4,460 ± 210	QU-304	5,675 ± 95	AA-6028	6,850 ± 70	TO-2457
3580 ± 50	AA-25283	4,461 ± 50	AA-3099	5,685 ± 70	AA-21749	6,880 ± 70	TO-2460
3,580 ± 120	Y-1831	4,500 ± 80	AA-33631	5,700 ± 240	GX-6293	6,885 ± 250	GX-10081
3,600 ± 75	AA-3783	4,540 ± 300	AA-650	5,705 ± 65	AA-31771	6,920 ± 90	GSC-4162
3,600 ± 480	I-1317	4,560 ± 50	CAMS-44870	5,710 ± 80	DIC-335	6,930 ± 150	GSC-739
3,605 ± 75	AA-6525	4,560 ± 180	GX-7091	5,710 ± 200	I-1319	6,935 ± 220	GX-8504
3,620 ± 55	AA-3274	4,590 ± 115	I-2582	5,750 ± 110	GaK-4440	6,940 ± 75	AA-9363
3,650 ± 160	GX-6838	4,650 ± 60	AA-3818	5,750 ± 250	I-486	6,960 ± 110	TO-3264
3,650 ± 180	GX-8941	4,660 ± 90	SI-1699	5,780 ± 80	GSC-4152	6,980 ± 110	GSC-5492
3,650 ± 200	SI-2556	4,670 ± 40	NSRL-10678	5790 ± 80	AA-19904	6,990 ± 70	AA-1800
3,660 ± 55	NSRL-10184	4,680 ± 50	CAMS-44863	5,800 ± 70	GSC-2138	7,000 ± 150	GSC-599
3,670 ± 270	S-12	4,700 ± 210	I-487	5820 ± 90	AA-21770	7,015 ± 65	AA-10117

Appendix 2B. Continued.

Reported Date	Lab No.	Reported Date	Lab No.	Reported Date	Lab No.		
7,020 ± 80	AA-1507	7,800 ± 150	QC-905	8,240 ± 150	CAMS-10359	8,580 ± 70	AA-11447
7,030 ± 190	I-1554	7,800 ± 70	AA-6453	8,240 ± 90	GSC-3404	8,580 ± 120	GSC-2684
7060 ± 80	AA-24831	7,805 ± 70	AA-3278	8,245 ± 75	AA-13050	8,580 ± 150	GSC-3469
7,060 ± 175	GX-8160	7,810 ± 70	AA-7900	8,250 ± 60	AA-24840	8,590 ± 100	GSC-3666
7,060 ± 70	TO-2462	7,820 ± 140	Y-1834	8,250 ± 750	I-1316	8,600 ± 160	GSC-5223
7,075 ± 215	QC-881	7,830 ± 120	AA-4918	8,260 ± 80	AA-4574	8,600 ± 110	GSC-3648
7,080 ± 120	GSC-5903	7,830 ± 230	GX-10290	8,260 ± 60	AA-12888	8,605 ± 85	AA-14206
7,080 ± 170	I-1672	7,830 ± 60	AA-11876	8,270 ± 70	AA-12887	8,610 ± 185	DIC-375
7,100 ± 140	GaK-3365	7,835 ± 90	AA-13228	8,280 ± 120	AA-4916	8,615 ± 75	AA-5990
7,105 ± 720	GX-6607	7,840 ± 70	AA-10651	8,285 ± 285	GX-8755	8,630 ± 70	AA-3280
7,140 ± 65	NSRL-10679	7,850 ± 290	GX-9996	8,290 ± 170	GaK-3092	8,635 ± 565	GX-9302
7,170 ± 70	AAR-4208	7,865 ± 250	QC-1137	8,290 ± 90	GSC-2283	8,635 ± 80	AA-29212
7,185 ± 120	QC-1138	7,870 ± 150	GaK-3093	8,300 ± 65	AA-4160	8,640 ± 105	AA-14210
7,200 ± 150	I-1598	7,880 ± 90	AA-9290	8,300 ± 135	I-2611	8,640 ± 500	CAMS-17146
7,200 ± 80	GSC-3991	7,880 ± 70	TO-748	8,305 ± 170	AA-11435	8,640 ± 70	CAMS-25758
7,220 ± 65	AA-10120	7,900 ± 225	GX-9430	8,320 ± 105	AA-4250B	8,640 ± 100	GSC-3951
7,220 ± 250	GX-5624	7,900 ± 210	I-1602	8,320 ± 95	AA-3815	8,645 ± 315	GX-9290
7,230 ± 90	AA-1181	7,900 ± 70	TO-751	8,320 ± 140	GSC-2506	8,650 ± 80	DIC-332
7,230 ± 120	GX-10860	7920 ± 110	AA-27751	8,325 ± 60	AA-17258	8,650 ± 75	AA-3102
7,230 ± 830	TO-3269	7,930 ± 300	I-1246	8,325 ± 75	AA-15130	8,650 ± 85	AA-14207
7,240 ± 140	AA-19913	7,940 ± 130	I-1932	8,350 ± 70	AA-15123	8,660 ± 175	SI-5172
7,250 ± 240	GX-9866	7,940 ± 920	TO-3266	8,350 ± 300	I-724	8,660 ± 65	AA-3104
7,260 ± 70	TO-2458	7,940 ± 90	TO-3666	8,350 ± 80	TO-2461	8,660 ± 110	GSC-2183
7,265 ± 70	AA-31251	7,950 ± 100	AA-1825	8,360 ± 70	TO-1860	8,660 ± 160	GSC-2466
7270 ± 65	AA-21768	7,950 ± 170	GaK-2566	8,360 ± 60	AA-7893	8,660 ± 110	GSC-3468
7,285 ± 200	GX-6603	7,950 ± 140	GaK-3677	8,360 ± 80	AAR-3710	8,670 ± 60	CAMS-18690
7,290 ± 120	Y-1835	7,960 ± 105	AA-8570	8,365 ± 75	AA-6299	8,680 ± 140	AA-2641
7,330 ± 65	AA-13243	7,960 ± 140	Y-1833	8,380 ± 60	CAMS-11125	8,680 ± 140	GSC-2478
7,340 ± 135	QC-901	7,970 ± 340	I-1673	8,380 ± 510	TO-3270	8,680 ± 110	GSC-4602
7,350 ± 90	GSC-4038	7,980 ± 175	SI-4180	8,390 ± 250	AA-2275	8,690 ± 90	GSC-2001
7,365 ± 410	SI-1690	7,985 ± 85	AA-12893	8,390 ± 80	CAMS-8251	8,690 ± 90	GSC-5163
7,370 ± 95	GX-12035	7,985 ± 130	QC-904	8,390 ± 80	AA-3481	8,690 ± 120	GSC-3157
7,380 ± 200	GSC-5688	7,990 ± 170	GaK-4837	8,395 ± 70	AA-13055	8,715 ± 165	AA-11437
7,380 ± 220	GSC-2771	7,995 ± 65	AA-7892	8,400 ± 160	QC-879	8,715 ± 65	AA-14686
7,395 ± 70	AA-13236	8,000 ± 150	GSC-630	8,400 ± 230	AA-19914	8,720 ± 70	AA-3941
7,410 ± 60	AA-3495	8,000 ± 320	GX-6840	8,410 ± 340	GSC-1638	8,730 ± 80	AA-3103
7,425 ± 60	AA-3850	8010 ± 90	AA-20741	8,415 ± 65	AA-31235	8,730 ± 120	GSC-2384
7,430 ± 230	AA-6522	8,010 ± 255	GX-9865	8,425 ± 375	AA-191	8,735 ± 235	QC-714
7,470 ± 70	CAMS-7790	8,025 ± 110	QC-452	8,430 ± 140	Y-1830	8,740 ± 280	TO-3271
7485 ± 150	AA-27752	8,030 ± 60	CAMS-25762	8,435 ± 105	GX-930	8,750 ± 165	AA-11436
7,500 ± 200	I-1553	8,030 ± 80	GSC-3603	8,440 ± 150	GaK-3862	8,750 ± 100	GSC-2508
7,505 ± 100	SI-2611	8,045 ± 60	AA-10649	8,445 ± 55	AA-10251	8,755 ± 80	AA-4027
7,510 ± 320	QC-902	8,050 ± 115	QC-457	8,450 ± 70	AA-11882	8,760 ± 65	AA-10645
7,540 ± 40	CAMS-44872	8,055 ± 70	AA-15129	8,450 ± 190	GX-8159	8,760 ± 350	ST-3816
7,540 ± 130	GSC-5677	8,060 ± 70	TO-750	8,450 ± 70	TO-2471	8,770 ± 260	GX-13794
7,560 ± 130	GaK-3678	8,070 ± 250	GX-6839	8,460 ± 95	AA-11590	8,780 ± 230	GX-13022
7,575 ± 125	AA-9289	8,075 ± 145	AA-3814	8,460 ± 245	GX-13800	8,785 ± 60	AA-10652
7,577 ± 137	AA-1004	8,110 ± 360	TO-3668	8,465 ± 90	AA-12890	8,785 ± 80	AA-17260
7,600 ± 60	AA-8963	8,120 ± 60	AA-31237	8,470 ± 90	TO-1871	8,790 ± 380	GSC-2991
7,610 ± 65	DIC-334	8,130 ± 65	AA-12610	8,480 ± 270	GSC-2083	8,795 ± 95	AA-14030
7,630 ± 190	AA-29209	8,135 ± 210	QC-883	8,480 ± 280	GSC-3015	8,800 ± 70	TO-2472
7,640 ± 45	NSRL-10674	8,140 ± 250	QC-882	8,485 ± 60	AA-3494	8,805 ± 60	AA-12884
7,675 ± 115	AA-8962	8,155 ± 130	AA-17380	8,490 ± 200	AA-11879	8,810 ± 90	GSC-4607
7,685 ± 260	GX-13795	8,160 ± 145	QC-880	8,490 ± 90	AAR-4478	8,810 ± 205	GX-6837
7,690 ± 90	GSC-5526	8,160 ± 70	AA-15128	8,490 ± 270	TO-3273	8,815 ± 275	GX-5623
7,710 ± 190	GSC-5699	8,160 ± 150	TO-3263	8,500 ± 90	AA-2349	8,820 ± 110	SI-4181
7,720 ± 100	GSC-6416	8,170 ± 60	AA-12889	8,510 ± 90	AA-11684	8,845 ± 60	AA-27764
7,725 ± 190	GX-12037	8,170 ± 245	GX-11548	8,510 ± 110	TO-3272	8,845 ± 265	GX-8671
7,730 ± 70	TO-749	8,170 ± 140	TO-3265	8,520 ± 110	AA-33633	8,850 ± 90	TO-2463
7,730 ± 180	GX-13801	8,175 ± 95	AA-12607	8,525 ± 80	AA-6464	8855 ± 95	AA-19922
7,740 ± 140	GSC-556	8180 ± 80	AA-31751	8,525 ± 60	AA-10648	8,860 ± 110	GSC-5895
7,750 ± 135	I-2831	8,180 ± 130	I-1983	8,530 ± 60	AA-12885	8,865 ± 165	AA-11438
7,765 ± 105	AA-2625	8,190 ± 120	Y-1705	8545 ± 160	AA-27753	8,870 ± 100	GSC-5483
7,770 ± 100	GSC-2111	8,195 ± 65	AA-6463	8,545 ± 170	AA-19912	8,875 ± 110	AA-8394
7,780 ± 115	SI-5173	8,200 ± 90	AAR-4480	8,550 ± 160	TO-2470	8880 ± 75	AA-19919
7,785 ± 75	AA-10257	8,210 ± 130	I-1933	8,555 ± 95	AA-12609	8,890 ± 70	CAMS-11122
7,785 ± 140	AA-17379	8,210 ± 50	QL-187	8,560 ± 70	AA-14687	8,890 ± 100	GSC-2568
7,790 ± 230	AA-413	8,210 ± 180	GSC-4578	8,570 ± 230	TO-2465	8,905 ± 65	AA-14028
7,790 ± 65	AA-3974	8,220 ± 90	GSC-3404	8,575 ± 75	AA-15689	8,915 ± 65	AA-13174
7,795 ± 165	AA-11434	8,230 ± 160	GaK-3090	8,580 ± 70	AA-6312	8,920 ± 65	AA-10656

Appendix 2B. Continued.

Reported Date	Lab No.	Reported Date	Lab No.	Reported Date	Lab No.		
8,920 ± 60	CAMS-18688	9,340 ± 84	AA-1916	9,740 ± 65	AA-7895	10,430 ± 1250	GX-9434
8,920 ± 80	NSRL-10675	9,350 ± 75	AA-6302	9,745 ± 85	AA-20192	10,435 ± 95	AA-7009
8,925 ± 105	AA-4575	9,355 ± 70	AA-4255	9,750 ± 70	AA-11443	10,435 ± 85	AA-6309
8,930 ± 80	TO-2466	9,355 ± 75	AA-17861	9,785 ± 525	GX-9291	10,445 ± 100	AA-6468
8,940 ± 70	AA-13241	9,360 ± 230	I-1315	9,800 ± 75	AA-6311	10,445 ± 75	AA-6310
8,950 ± 65	AA-14029	9,370 ± 80	AA-14025	9,800 ± 60	CAMS-32047	10,450 ± 85	AA-26519
8,950 ± 160	GSC-2982	9,370 ± 90	GSC-5486	9,815 ± 70	AA-31236	10,460 ± 120	AA-31773
8,965 ± 110	AA-3976	9,370 ± 140	QC-447	9,825 ± 95	AA-15701	10,470 ± 65	AA-7891
8980 ± 70	AA-21771	9,375 ± 70	AA-4666	9,845 ± 175	SI-5170	10,470 ± 120	AA-13051
8,980 ± 180	GaK-5479	9,380 ± 260	GX-10107	9,850 ± 250	GaK-2573	10,480 ± 85	AA-31754
8,990 ± 80	CAMS-22023	9,380 ± 80	AA-5987	9855 ± 100	AA-20742	10,480 ± 260	AA-31257
8,995 ± 120	AA-8395	9,385 ± 140	AA-3109	9,870 ± 160	AA-3465	10,490 ± 450	AA-264
9,000 ± 170	AA-5117	9,385 ± 75	AA-8390	9,875 ± 130	QC-903	10,500 ± 110	GSC-5478
9,000 ± 90	AA-8392	9,385 ± 280	GX-8943	9,880 ± 200	GSC-2201	10,500 ± 110	CAMS-17401
9,005 ± 70	AA-31254	9,395 ± 100	QC-448	9,885 ± 170	AA-17262	10,505 ± 85	AA-5838
9,010 ± 100	AA-3678	9,400 ± 190	TO-3274	9,890 ± 85	AA-6462	10,510 ± 70	QL-1174
9,025 ± 90	AA-13173	9,410 ± 100	GSC-5149	9,890 ± 65	AA-31255	10,510 ± 90	AA-5839
9,030 ± 75	AA-15126	9,410 ± 70	AA-11444	9,935 ± 165	QC-451	10,510 ± 80	AA-14682
9,040 ± 85	AA-10253	9,420 ± 60	CAMS-44864	9,950 ± 185	QC-453	10,520 ± 110	AA-29199
9,040 ± 110	AA-34401	9,420 ± 135	GX-13021	9,955 ± 75	AA-11448	10,530 ± 95	AA-5032
9,045 ± 80	AA-17261	9,425 ± 150	AA-5291	9,960 ± 230	GSC-2752	10,530 ± 90	AA-5033
9,060 ± 330	GX-9328	9,430 ± 50	CAMS-44869	9,975 ± 100	AA-11584	10,530 ± 110	SI-5758
9,060 ± 70	AAR-3515	9,430 ± 50	CAMS-25764	9,980 ± 210	GSC-5340	10,530 ± 135	AA-8959
9,060 ± 60	CAMS-25761	9,435 ± 50	AA-8327	9,980 ± 70	AA-7896	10,555 ± 75	AA-5835
9,065 ± 80	AA-14024	9435 ± 75	AA-19920	10,000 ± 75	AA-7560	10,560 ± 75	AA-8388
9,075 ± 75	AA-10254	9,440 ± 110	CAMS-18449	10,000 ± 1000	GaK-2574	10,570 ± 85	AA-5841
9,080 ± 50	NSRL-10676	9,450 ± 360	AA-412	10,000 ± 200	GSC-2813	10,570 ± 110	AAR-3706
9,085 ± 290	AA-244A	9,450 ± 95	AA-2633	10,010 ± 360	AA-886	10,580 ± 95	AA-33013
9,085 ± 85	AA-11586	9,460 ± 95	AA-6301	10,010 ± 110	AA-3585,6	10,590 ± 70	AA-31242
9,090 ± 90	AA-2223	9,460 ± 75	AA-15124	10,015 ± 120	AA-4250A	10,595 ± 380	GX-13797
9,090 ± 95	AA-14026	9,465 ± 100	AA-15125	10,025 ± 225	GX-7882	10,600 ± 75	AA-3583A
9,092 ± 150	QC-454	9,480 ± 80	AA-16405	10,030 ± 80	CAMS-28664	10,615 ± 75	AA-5836
9,100 ± 80	AA-16403	9,480 ± 165	DIC-374	10,035 ± 130	AA-6472	10,625 ± 90	AA-23220
9,100 ± 140	GSC-1969	9,480 ± 565	GX-8751	10,070 ± 95	AA-15698	10,625 ± 170	AA-3583B
9,100 ± 100	QC-449	9,490 ± 70	AA-29195	10,080 ± 75	AA-6854	10,630 ± 380	AA-7136
9,105 ± 142	AA-8333	9,500 ± 90	AA-2350	10,090 ± 120	AA-33012	10,635 ± 80	AA-6308
9,110 ± 470	GX-9293	9,500 ± 150	BGS-1472	10,090 ± 75	AA-8391	10,680 ± 85	AA-5840
9,110 ± 160	GSC-2215	9,500 ± 105	AA-6305	10,095 ± 95	SI-2612	10,685 ± 385	GX-6352
9,120 ± 130	AA-31760	9,505 ± 80	AA-13172	10,100 ± 110	GSC-2725	10,695 ± 85	AA-10258
9,125 ± 65	AA-13175	9,510 ± 90	GSC-2750	10,115 ± 75	AA-6452	10,705 ± 70	AA-3940
9125 ± 185	AA-27754	9,515 ± 70	AA-11441	10,130 ± 180	GX-12858	10,705 ± 80	AA-31267
9,130 ± 65	AA-17255	9,550 ± 320	GSC-5299	10,130 ± 140	AAR-4477	10,720 ± 70	AA-31256
9,140 ± 50	CAMS-44862	9,550 ± 90	SI-2610	10,170 ± 70	AA-11445	10,720 ± 140	GX-15279
9,145 ± 75	AA-17392	9,560 ± 65	AA-31248	10,180 ± 90	AA-17264	10,720 ± 140	QC-480A
9,180 ± 1140	GSC-707	9,565 ± 80	AA-15700	10,200 ± 100	GSC-5037	10,730 ± 100	CAMS-44860
9,180 ± 180	Y-1832	9,570 ± 370	GX-8753	10,200 ± 210	GSC-2778	10,730 ± 80	CAMS-11793
9,190 ± 195	GX-8194	9580 ± 100	AA-31752	10,200 ± 160	GSC-4948	10,740 ± 85	AA-6307
9,200 ± 200	AA-2637	9,580 ± 100	AA-34402	10,225 ± 100	AA-17393	10,745 ± 75	AA-29211
9,215 ± 80	AA-7561	9,590 ± 100	AA-29192	10,240 ± 90	AA-19917	10,750 ± 65	AA-10245
9,220 ± 75	AA-15127	9,595 ± 90	SI-4757	10,245 ± 70	AA-10248	10,750 ± 70	AA-14683
9,220 ± 75	AA-24835	9,600 ± 140	AA-16404	10,250 ± 390	AA-651	10,760 ± 150	QC-480C
9,230 ± 100	GSC-2618	9,600 ±					