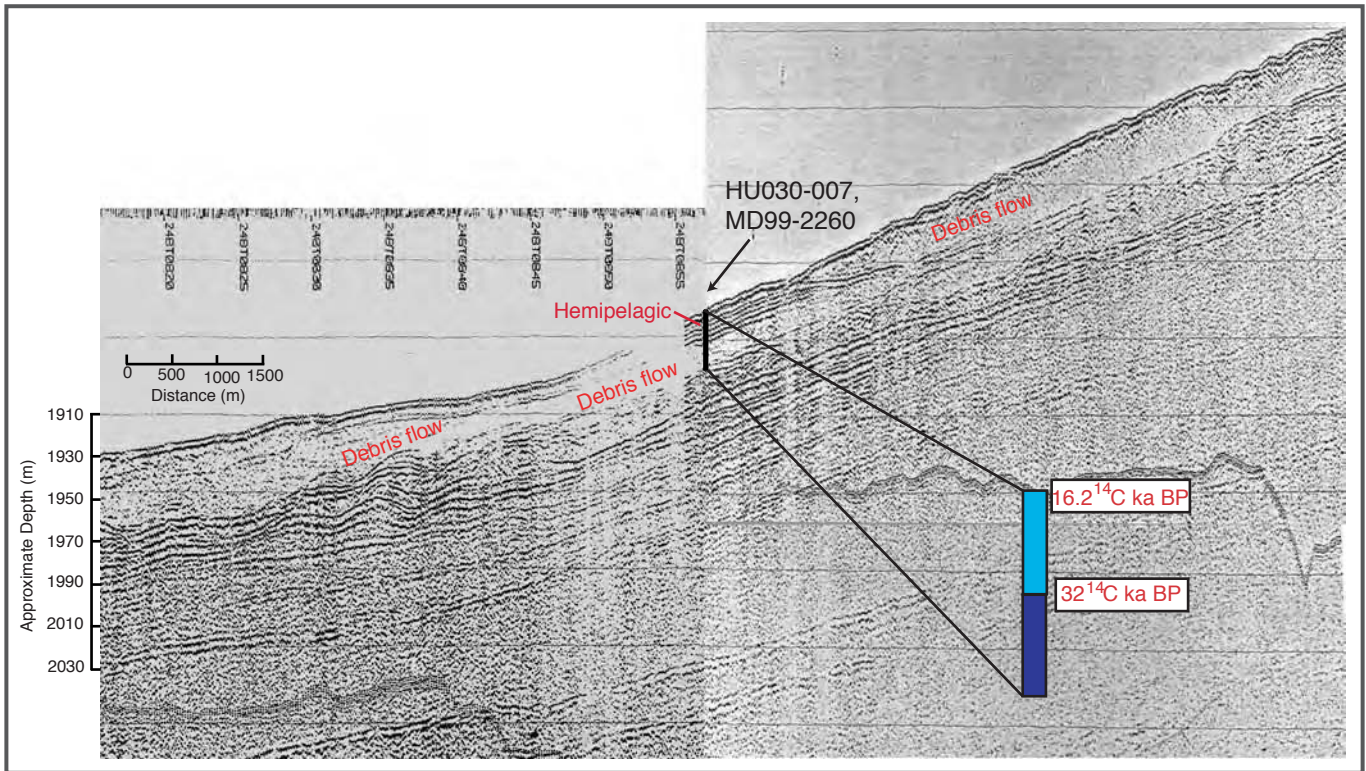


# Radiocarbon Date List X: Baffin Bay, Baffin Island, Iceland, Labrador Sea, and the Northern North Atlantic

Compiled by G. Dunhill, J.T. Andrews and G.B. Kristjánsson



High resolution seismic reflection profile with core location and interpretation from the East Greenland Slope showing debris flows on slope from at least >32 <sup>14</sup>C ka to 14.5 <sup>14</sup>C ka.

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  E. James   A.E. Jennings   N. Koc   
  G.B. Kristjánsson   S. Principato   L.M. Smith  
  T. Vorren   N. Weiner   K. Williams

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### **Abstract**

Date List X contains an annotated listing of 213 radiocarbon dates determined on samples from marine and terrestrial environments. The marine samples were collected from the East Greenland, Iceland, Spitzbergen, and Norwegian margins, Baffin Bay, and Labrador Sea. The terrestrial samples were collected from Vestfirðir, Iceland and Baffin Island. The samples were submitted by INSTAAR and researchers affiliated with INSTAAR's Micropaleontology Laboratory under the direction of Dr.'s John T. Andrews and Anne E. Jennings. All of the dates from marine sediment cores were determined from either shells or foraminifera (both benthic and planktic). All dates were obtained by the Accelerator Mass Spectrometry (AMS) method. Regions of concentrated marine research include: Baffin Bay, Baffin Island, Labrador Sea, East Greenland fjords, shelf and slope, Denmark Strait, the southwestern and northwestern Iceland shelves, and Vestfirðir, Iceland. The non-marine radiocarbon dates are from peat, wood, plant microfossils, and mollusc. The radiocarbon dates have been used to address a variety of research objectives such as: 1. determining the timing of northern hemisphere high latitude environmental changes including glacier advance and retreat, and 2. assessing the accuracy of a fluctuating reservoir correction. 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. Where significant, stratigraphic and sample contexts are presented for each core to document the basis for interpretations.

## Introduction

This Radiocarbon Date List is the tenth in a series that reports the results of radiocarbon analyses obtained by researchers at the University of Colorado, Institute of Arctic and Alpine Research (INSTAAR) and at other institutions with shared research in the Arctic region. Two thirds of the radiocarbon dates included in this report are from material recovered from marine sediment cores which were collected from the northern North Atlantic, while the remaining one third of the radiocarbon dates are from terrestrial samples from either northern Baffin Island or NW Iceland. Figures 1-4 show the locations of the samples.

## Guide to this Date List

This date list presents two types of radiocarbon ages: “reported” and “corrected”. Reported ages are those given by the respective radiocarbon laboratory. Since the mid-1970’s, most labs have followed the approach of Stuiver and Pollach (1977) for reporting “conventional radiocarbon dates”. With this approach reported dates are without a marine reservoir correction, with sample errors of  $\pm 1$  standard deviation, and specifically corrected  $\delta^{13}\text{C}$  sample fractionation, normalized to a standard  $\delta^{13}\text{C}$  of  $-25\text{‰}$ .

This date list also presents “corrected dates” for the marine samples, which have been corrected for the averaged, localized marine reservoir effect. The resulting age is the reported age minus the marine reservoir effect. Corrected dates are not listed for terrestrial samples, unless the date was obtained from a marine species.

Marine core names contain prefixes and suffixes that describe the core. The prefix is usually the cruise identifier, which includes the vessel abbreviation, cruise number and year. The suffix describes the types of core or sampling equipment used:

BC: box core

GC: gravity core

GGC: giant gravity core

PC: piston core

LCF: large-diameter long coring facility piston core

TWC: trigger weight core

For example, core HU93030-006 TWC was collected by the Hudson in 1993 on cruise 30. The core number is 006 and was collected with a trigger weight coring device.

Date list X follows the format of previously released date lists. Part one lists the dates from marine cores, while part two presents data from terrestrial samples and lake cores. Within each part the cores are listed alphabetically by region. Within each region, cores are arranged alphabetically by the core number. Location information is listed once for cores with multiple radiocarbon dates. The location information includes: a statement of the general region, latitude, longitude, and water depth in meters. Latitude/longitude values follow the convention that positive values are north latitudes and east longitudes, whereas, negative values are south latitudes and west longitudes. The reported ages, which are followed by an asterik, designate ages which had to be mass corrected. The mass corrected age is presented.

For each date we report the following where applicable:

- Radiocarbon laboratory number (see below for explanation of abbreviations)
- GRL-numbers (laboratory numbers from the INSTAAR Sedimentology Laboratory)
- Sample depth in the core in centimeters
- Reported radiocarbon date and analytical uncertainty (in radiocarbon years BP)
- Corrected radiocarbon age and analytical uncertainty (in radiocarbon years BP)
- Type of material dated
- Sample weight in milligrams
- Genus of the submitted sample
- Species of the submitted sample

- The either measured or assumed  $\delta^{13}\text{C}$  value of the sample
- The person or persons who obtained the date for their research and contributed it to the date list for reporting
- Sample notes such as the condition of sample or a detailed species list
- Stratigraphic relations (geologic context of the sample or entire core)
- Core summary (an interpretive discussion of the significance of the date)
- Significance (any significant result pertaining to this specific date)
- References

Three appendices conclude the report. Appendix 1 is an index to the dates arranged by radiocarbon laboratory number. Dates have been arranged alphabetically by region in appendix 2 and by increasing age in appendix 3.

Abbreviations of radiocarbon dating laboratories included in this report are:

AA—NSF-University of Arizona AMS Facility

CAMS—Center for AMS at Lawrence Livermore National Laboratory

CURL—Laboratory for Radiological Dating in Trondheim, Norway

NSRL—INSTAAR Radiocarbon Laboratory, samples run at Woods Hole

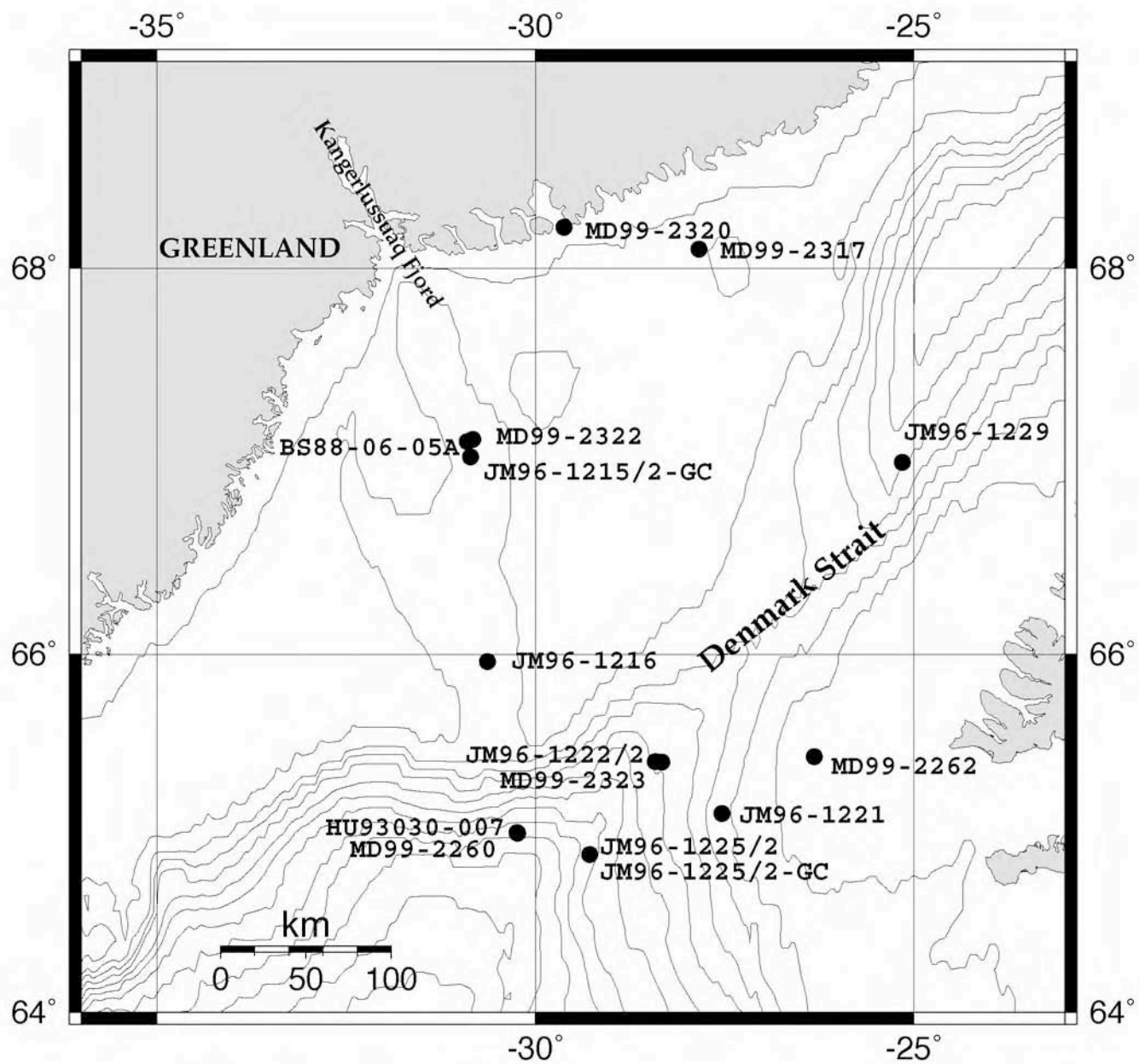


Figure 1: Map of Denmark Strait with core locations



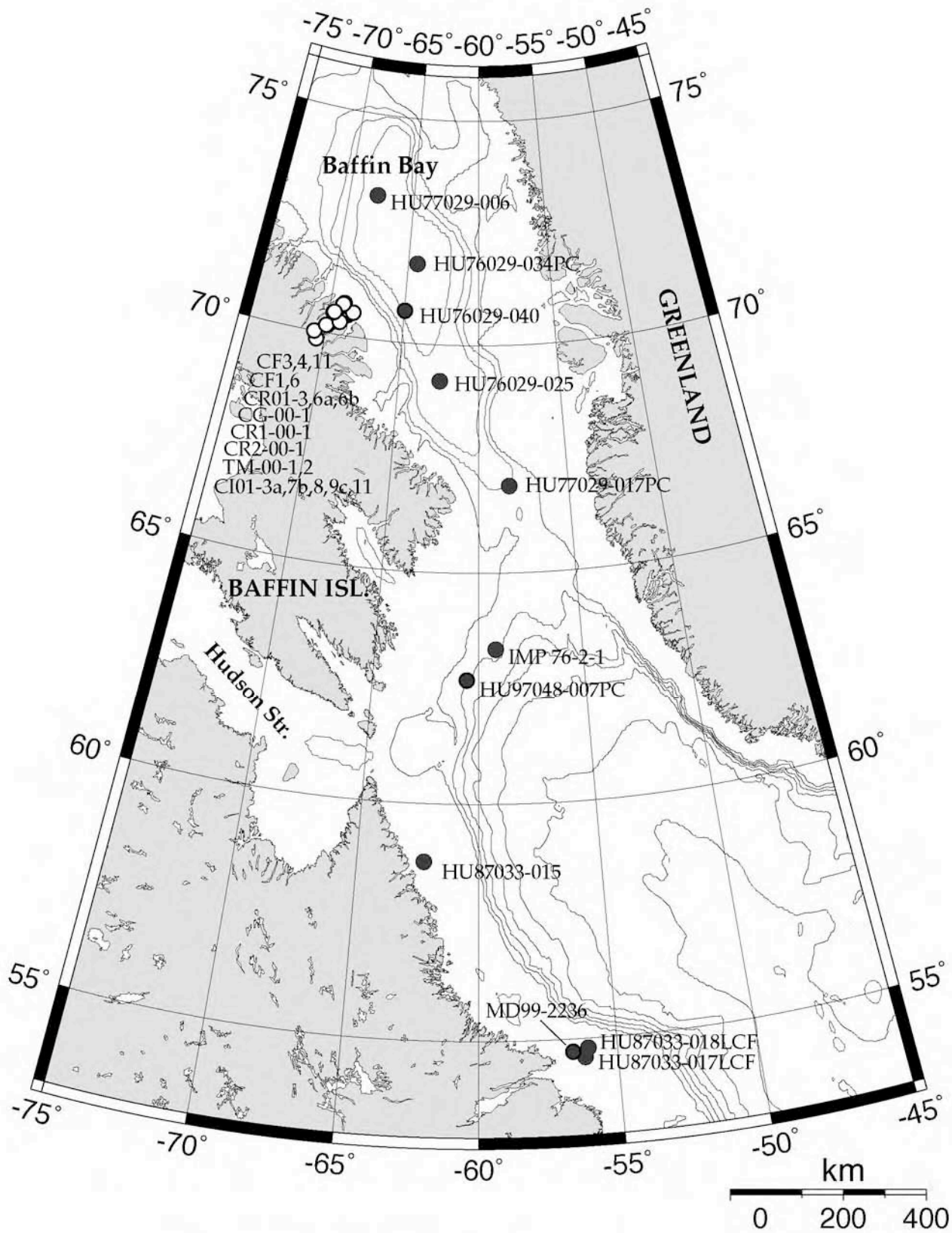


Figure 2: Map with Baffin Bay and Baffin Island sample locations. Note: white dots are for terrestrial samples and black dots are for marine samples.

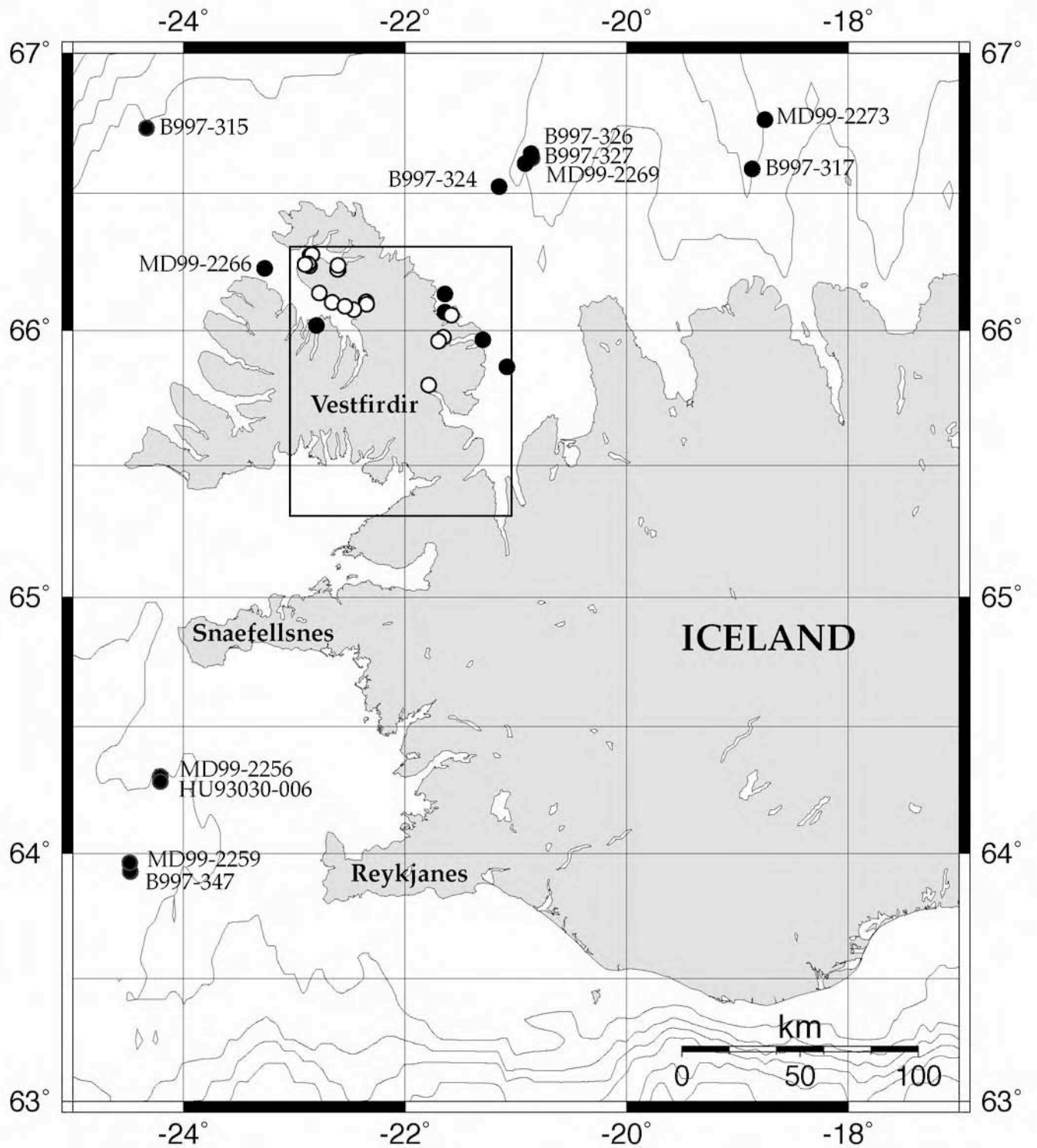


Figure 3: Map showing Iceland marine and terrestrial sample locations. Note: white dots are for terrestrial samples and black dots are for marine samples. Box shows location of map in figure 3.

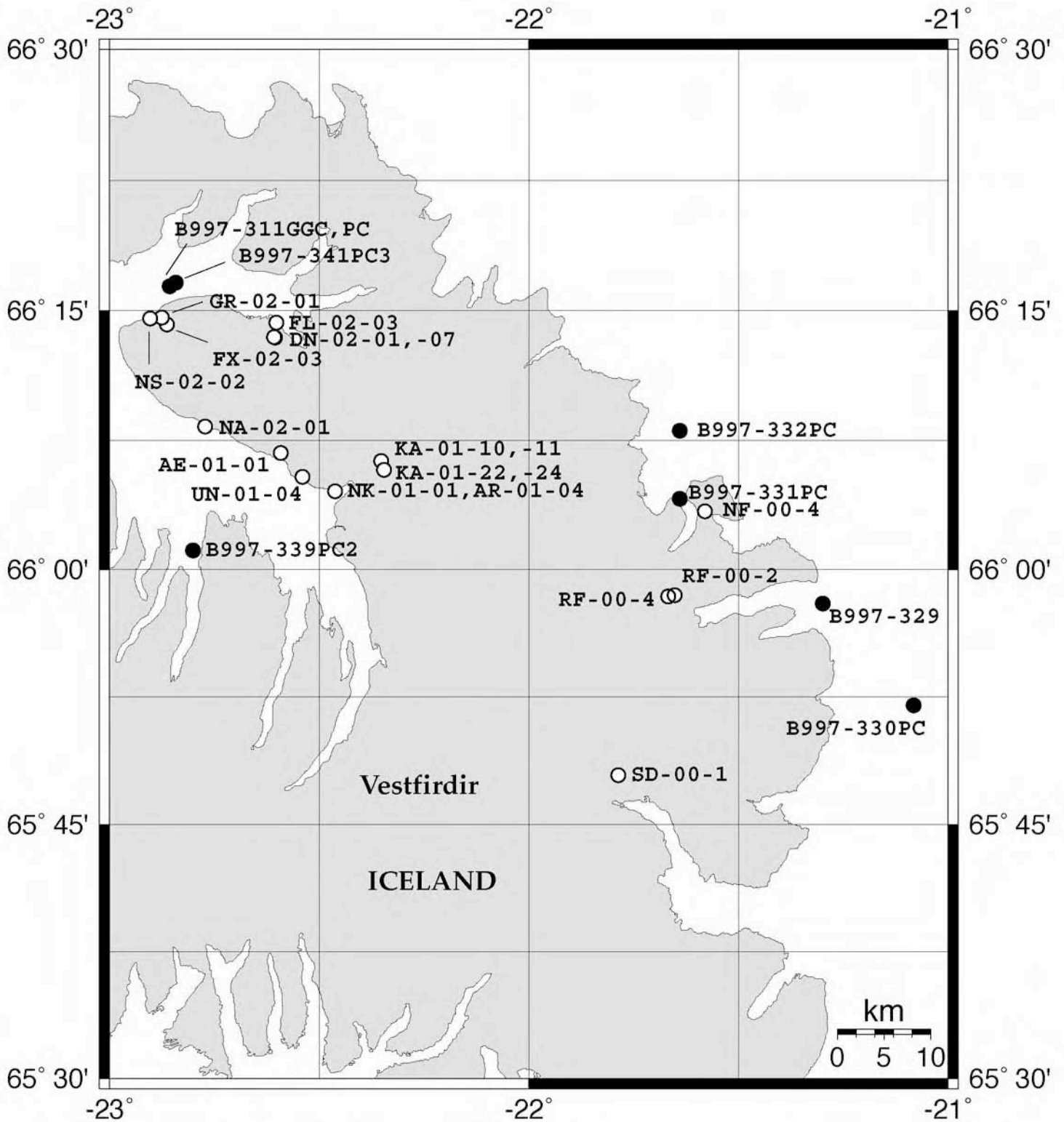


Figure 4: Map with NW Iceland marine and terrestrial sample locations. Note: white dots are for terrestrial samples and black dots are for marine samples.

**PART 1: MARINE SAMPLES**

**BAFFIN BAY**

<b>Core: HU76029-025</b>		
<b>Location:</b> Baffin Bay		
<b>Lat.:</b> 69°12.3'	<b>Long.:</b> -62°25.5'	<b>Depth (mwd):</b> 1910

**Lab ID:** AA17385    **GRL-1162-S**    **Depth (cm):** 73.5  
**Age:** \*12,830±95    **Corr. Age:** 12380±95    **Material:** Foraminifera  
**Weight (mg):** 8.3    **Genus:** *Neogloboquadrina*    **Species:** *pachyderma* (sinistral)  
**δ<sup>13</sup>C:** Measured    **δ<sup>13</sup>C:** 0.20

**Contributor:** Andrews

**Sample Notes:** 843 sinistral specimens

**Reference:** Andres et al., 1998b

\*Mass-corrected age; mass-uncorrected age was 12,785 ± 95

<b>Core: HU76029-034PC</b>		
<b>Location:</b> Baffin Bay		
<b>Lat.:</b> 71°46.1'	<b>Long.:</b> -64°22.2'	<b>Depth (mwd):</b> 2275

**Lab ID:** AA17386    **GRL-1163-S**    **Depth (cm):** 300  
**Age:** >49,900    **Corr. Age:**    **Material:** Foraminifera  
**Weight (mg):** 9.5    **Genus:** *Neogloboquadrina*    **Species:** *pachyderma* (sinistral)  
**δ<sup>13</sup>C:** Measured    **δ<sup>13</sup>C:** 0.80

**Contributor:** Andrews

**Sample Notes:** 1000 sinistral specimens

**Reference:** Andrews et al., 1998

<b>Core: HU76029-040</b>		
<b>Location:</b> Baffin Bay		
<b>Lat.:</b> 70°42.4'	<b>Long.:</b> -64°58.7'	<b>Depth (mwd):</b> 2041

**Lab ID:** AA17387    **GRL-1164-S**    **Depth (cm):** 75  
**Age:** \*13,170±125    **Corr. Age:** 12720±125    **Material:** Foraminifera  
**Weight (mg):** 5.2    **Genus:** *Neogloboquadrina*    **Species:** *pachyderma* (sinistral)  
**δ<sup>13</sup>C:** Measured    **δ<sup>13</sup>C:** 0.20

**Contributor:** Andrews

**Sample Notes:** 62 sinistral specimens

\*mass-corrected age; uncorrected age was 13,015 ± 105

<b>Core: HU77029-006</b>		
<b>Location:</b> Baffin Bay		
<b>Lat.:</b> 73°12.1'	<b>Long.:</b> -67°49.42'	<b>Depth (mwd):</b> 2200

**Lab ID:** AA17384    **GRL-1161-S**    **Depth (cm):** 25.5  
**Age:** \*12,945±110    **Corr. Age:** 12495±110    **Material:** Foraminifera  
**Weight (mg):** 6.6    **Genus:** *Neogloboquadrina*    **Species:** *pachyderma* (sinistral)

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.50  
**Contributor:** Jennings/Andrews  
**Sample Notes:** 748 specimens  
\*Mass-corrected age. Uncorrected age is 12,835  $\pm$  130

<b>Core: HU77029-017PC</b>		
<b>Location:</b> Baffin Bay, north of the Davis Strait sill		
<b>Lat.:</b> 66°54.09'	<b>Long.:</b> -58°17.71'	<b>Depth (mwd):</b> 935

**Lab ID:** CAMS19389 GRL-1155-S      **Depth (cm):** 52-55  
**Age:** 10800 $\pm$ 50      **Corr. Age:** 10350 $\pm$ 50      **Material:** Mollusc  
**Weight (mg):** 7.2      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Assumed       $\delta^{13}\text{C}$ : 0.00  
**Contributor:** Andrews  
**Sample Notes:** small gastropod near a detrital carbonate layer (Aksu's Facies A).  
**Significance:** Constrains timing of detrital carbonate layers in Baffin Bay  
**Reference:** Andrews et al., 1998

**Lab ID:** AA17388      **GRL-1165-S**      **Depth (cm):** 127  
**Age:** 11830 $\pm$ 90      **Corr. Age:** 11380 $\pm$ 90      **Material:** Mollusc  
**Weight (mg):** 27.1      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Assumed       $\delta^{13}\text{C}$ : 2.70  
**Contributor:** Andrews  
**Sample Notes:** Unidentified bivalve.  
**Significance:** Constrains sedimentation rates and the timing of Baffin Bay detrital carbonate events.  
**Reference:** Andrews et al., 1998

## EAST GREENLAND SHELF

### Core: BS88-06-05A

**Location:** East Greenland Shelf, Kangerdlugsaq Trough

**Lat.:** 67°7.54'

**Long.:** -30°54.26'

**Depth (mwd):** 707

**Lab ID:** AA43584

**GRL:** 1645-S

**Depth (cm):** 16-18

**Age:** 3411±53

**Corr. Age:** 2861±53

**Material:** Foraminifera

**Weight (mg):** 6.2

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 0.50

**Contributor:** Williams

**Significance:** This core is a member of a transect from the inner to outer shelf in Kangerdlugssuaq Trough. The data collected from the cores make it possible to infer the type of glacial environment prevalent on the shelf as well as relative surface water temperature changes from about 14,000 BP to present.

**Reference:** Andersen et al., in press.

### Core: JM96-1215/2-GC

**Location:** Kangerlugssuaq Trough, middle continental shelf, in deep basin seaward of inner shelf sill

**Lat.:** 67°2.8'

**Long.:** -30°51.6'

**Depth (mwd):** 668

**Lab ID:** AA32954

**GRL:** 1457-S

**Depth (cm):** 354-356

**Age:** 10480±85

**Corr. Age:** 9930±85

**Material:** Mollusc

**Weight (mg):** 6.1

**Genus:** *Chlamys*

**Species:** *groenlandica*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 1.60

**Contributor:** Jennings

**Stratigraphy:** Sample taken within postglacial marine seismic stratigraphic unit L.

### Core: JM96-1216

**Location:** Greenland Shelf, outer continental shelf, Kangerlussuaq Trough

**Lat.:** 65°57.77'

**Long.:** -30°38'

**Depth (mwd):** 478

**Lab ID:** Tual1714

**GRL:**

**Depth (cm):** 240-241

**Age:**

**Corr. Age:** 11365

**Material:** Foraminifera

**Weight (mg):**

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma*

**Contributor:** Hald

### Core: MD99-2317

**Location:** East Greenland shelf basin, near site of JM96-1205.

**Lat.:** 68°5.6'

**Long.:** -27°50.13'

**Depth (mwd):** 556

**Lab ID:** AA49379

**GRL:** 1657-S

**Depth (cm):** 310-314

**Age:** 3490±100

**Corr. Age:** 2940±100

**Material:** Foraminifera

**Weight (mg):** 2.5

**Contributor:** Jennings

**Sample Notes:** Mixed plank and Benthic species

**Stratigraphy:** Highest possible level to obtain date in this core (which begins below 150 cm and is disturbed to 224 cm). Above this level the fauna is largely agglutinated and lacked sufficient calcareous material for dating.

**Lab ID:** AA35177      **GRL-1544-S**      **Depth (cm):**695  
**Age:** 8265 $\pm$ 65      **Corr. Age:** 7715 $\pm$ 65      **Material:** Mollusc  
**Weight (mg):** 40  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.00  
**Contributor:** Jennings  
**Sample Notes:** Unidentifiable intact bivalve

**Lab ID:** AA40045      **GRL-1587-S**      **Depth (cm):** 909.5  
**Age:** 9311 $\pm$ 70      **Corr. Age:** 8760 $\pm$ 70      **Material:** Mollusc  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.66  
**Contributor:** Jennings  
**Sample Notes:** Intact bivalve

**Lab ID:** AA40046      **GRL-1588-S**      **Depth (cm):** 941  
**Age:** 9283 $\pm$ 58      **Corr. Age:** 8733 $\pm$ 58      **Material:** Mollusc  
**Genus:** *Nuculana*      **Species:** *buccata*  
**Contributor:** Jennings  
**Stratigraphy:** Mollusc extracted from homogeneous silty clay.

**Lab ID:** AA40047      **GRL-1589-S**      **Depth (cm):** 1078-1080  
**Age:** 9729 $\pm$ 59      **Corr. Age:** 9179 $\pm$ 59      **Material:** Mollusc  
**Genus:** *Nuculana*      **Species:** *buccata*  
**Contributor:** Jennings  
**Stratigraphy:** Mollusc recovered from homogeneous silty clay.

**Lab ID:** AA40048      **GRL1590-S**      **Depth (cm):** 1128  
**Age:** 10000 $\pm$ 600      **Corr. Age:** 9450 $\pm$ 600      **Material:** Mollusc  
**Weight (mg):** 22.9      **Genus:** unknown      **Species:** unknown  
**Contributor:** Jennings  
**Sample Notes:** Bivalve shell fragments -appears to have freshly broken has periostratum  
**Stratigraphy:** Mollusc extracted from homogeneous silty clay.

**Lab ID:** AA40049      **GRL-1591-S**      **Depth (cm):** 1479  
**Age:** 10745 $\pm$ 695      **Corr. Age:** 10195 $\pm$ 695      **Material:** Mollusc  
**Weight (mg):** 2.2      **Genus:** *Bathyarca*      **Species:** *glacialis*  
**Contributor:** Jennings  
**Sample Notes:** Single bivalve, may have been whole before probing.  
**Stratigraphy:** Mollusc recovered as close as possible to diatom mat (15.6 to 16.6 m). Unfortunately, small sample size and pretreatment resulted in large error on date and poor constraint on diatom mat age.

**Lab ID:** AA42785      **GRL-1615-S**      **Depth (cm):** 1850-1852  
**Age:** 11567 $\pm$ 88      **Corr. Age:** 11017 $\pm$ 88      **Material:** Foraminifera

**Weight (mg):** 6      **Genus:** *Elphidium*      **Species:** *excavatum*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -7.20

**Contributor:** Jennings

**Sample Notes:** 658 *Elphidium excavatum clavata*

**Significance:** Constrains age of *Elphidium excavatum* peak near top of glacial marine sediments.

**Lab ID:** AA43116      **GRL-1616-S**      **Depth (cm):** 1980-1982  
**Age:** 11950±110      **Corr. Age:** 11400±110      **Material:** Bryozoa

**Weight (mg):** 7.4

**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -5.10

**Contributor:** Jennings

**Stratigraphy:** Date on bryozoan layer within ice-proximal deglacial sediments. Sample from near base of *Elphidium excavatum* zone, lowest dateable sample in glacial marine sediments.

**Lab ID:** AA36606      **GRL-1562-S**      **Depth (cm):** 2496-2498  
**Age:** >40,600      **Material:** Mollusc

**Weight (mg):** 5.8

**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -1.30

**Contributor:** Jennings

**Sample Notes:** Unidentifiable fragment.

**Stratigraphy:** Mollusc extracted from homogeneous silty clay.

**Core: MD99-2320**

**Location:** East Greenland, Nansen Fjord

**Lat.:** 68°12.16'

**Long.:** -29°37.53'

**Depth (mwd):** 450

**Lab ID:** AA43360      **GRL-1644-S**      **Depth (cm):** 1330-1336  
**Age:** 1596±43      **Corr. Age:** 1046±43      **Material:** Foraminifera

**Weight (mg):** 3.2      **Genus:** *Cassidulina*      **Species:** *teretis*

**Contributor:** Jennings

**Sample Notes:** 87% *Cassidulina neoteretis* + 13% other benthics + *Neogloboquadrina pachyderm*

**Stratigraphy:** Date is from massive diamicton unit.

**Significance:** This 15.68-m long Calypso core is from the same position as BS1191-K14 (Jennings and Weiner, 1996). The calibrated basal age of the 1.6-m long BS1191-K14 indicated that 1.6 m represented 1300 yrs (Jennings and Weiner, 1996). The basal age of MD99-2320, reservoir corrected to 2.6 14C ka BP) is surprisingly young compared to what we had expected based on our earlier study. Confirmation of the young basal date was sought from 1330-1336 cm, which also produced a surprisingly young age of 1.05 14C ka BP. The upper 2 m of this core comprise interstratified diamictons and muds, similar to the lithofacies of BS1191-K14. However, below 3.5 m the core comprises featureless diamicton with the surprisingly young ages. Given the significant bending of the core pipe and other evidence that the corer hit something hard during descent into the sediments, we suggest that the sediments below 3.5 m or so represent flow-in or displaced sediment.

**Lab ID:** AA36607      **GRL-1563-S**      **Depth (cm):** 1586



**Age:** 2810 $\pm$ 440      **Corr. Age:** 2260 $\pm$ 440      **Material:** Foraminifera  
**Weight (mg):** 4.2      **Genus:** *Cassidulina*      **Species:** *teretis*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -2.10  
**Contributor:** Jennings  
**Sample Notes:** 1010 individuals  
**Stratigraphy:** Date recovered from base of core.

**Core: MD99-2322**

**Location:** East Greenland, Kangerlussuaq Trough  
**Lat.:** 67°8.18'      **Long.:** -30°49.67'      **Depth (mwd):** 714

**Lab ID:** C5734      **GRL-1612-S**      **Depth (cm):** 2.3  
**Age:** 675 $\pm$ 30      **Corr. Age:** 275 $\pm$ 30      **Material:** Mollusc  
**Weight (mg):** 83.2      **Genus:** *Asarte*      **Species:** sp  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.70  
**Contributor:** Jennings

**Core Summary:** The sediments are fairly homogeneous silty clay with very little structure.  
**Significance:** Nineteen AMS radiocarbon dates were obtained from this 26.36 m long Calypso core. The dates are all in stratigraphic order, and indicate that the core recovered a complete, high-resolution Holocene section.

**Lab ID:** AA40050      **GRL-1592-S**      **Depth (cm):** 32-36  
**Age:** 693 $\pm$ 38      **Corr. Age:** 293 $\pm$ 38      **Material:** Mollusc  
**Weight (mg):** 16.7      **Genus:** *Colus*      **Species:** *turgidulus*  
 $\delta^{13}\text{C}$ : Assumed  $\delta^{13}\text{C}$ : -4.10  
**Contributor:** Jennings  
**Sample Notes:** large gastropod - only part sent for dating

**Lab ID:** AA49380 **GRL:** 1658-S      **Depth (cm):** 100-103  
**Age:** 1267 $\pm$ 44      **Corr. Age:** 867 $\pm$ 44      **Material:** Foraminifera  
**Weight (mg):** 5  
**Contributor:** Jennings  
**Sample Notes:** mixed planktics and benthics

**Lab ID:** AA49381      **GRL-1659-S**      **Depth (cm):** 150  
**Age:** 1627 $\pm$ 46      **Corr. Age:** 1227 $\pm$ 46      **Material:** Bivalve  
**Weight (mg):** 18.3  
**Contributor:** Jennings

**Lab ID:** AA49382      **GRL-1660-S**      **Depth (cm):** 368  
**Age:** 3451 $\pm$ 39      **Corr. Age:** 3051 $\pm$ 39      **Material:** Bivalve  
**Weight (mg):** 17  
**Contributor:** Jennings

**Lab ID:** AA40051      **GRL-1593-S**      **Depth (cm):** 564  
**Age:** 4899 $\pm$ 55      **Corr. Age:** 4499 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 6.9

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.74  
**Contributor:** Jennings  
**Sample Notes:** Scaphopod

**Lab ID:** AA40052      **GRL-1594-S**      **Depth (cm):** 771  
**Age:** 6115 $\pm$ 65      **Corr. Age:** 5715 $\pm$ 65      **Material:** Mollusc  
**Weight (mg):** 2  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.74  
**Contributor:** Jennings  
**Sample Notes:** Small single shell fragment

**Lab ID:** AA40053      **GRL-1595-S**      **Depth (cm):** 1073  
**Age:** 8000 $\pm$ 300      **Corr. Age:** 7600 $\pm$ 300      **Material:** Mollusc  
**Weight (mg):** 6.4      **Genus:** *Nuculana*      **Species:** *buccata*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.65  
**Contributor:** Jennings

**Lab ID:** AA40044      **GRL-1596-S**      **Depth (cm):** 1298  
**Age:** 8609 $\pm$ 67      **Corr. Age:** 8209 $\pm$ 67      **Material:** Mollusc  
**Weight (mg):** 28.2      **Genus:** *Nuculana*      **Species:** *pernula*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -1.80  
**Contributor:** Jennings  
**Sample Notes:** Perfect paired shell with no sediment inside, perfect periastracum, pearly interior

**Lab ID:** AA43351      **GRL-1635-S**      **Depth (cm):** 1393  
**Age:** 8877 $\pm$ 62      **Corr. Age:** 8477 $\pm$ 62      **Material:** Mollusc  
**Weight (mg):** 35.2      **Genus:** *Nuculana*      **Species:** *buccata*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.40  
**Contributor:** Jennings

**Lab ID:** AA43352      **GRL-1636-S**      **Depth (cm):** 1432  
**Age:** 8999 $\pm$ 61      **Corr. Age:** 8599 $\pm$ 61      **Material:** Mollusc  
**Weight (mg):** 98.9      **Genus:** *Bathyarca*      **Species:** *glacialis*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.30  
**Contributor:** Jennings

**Lab ID:** AA43353      **GRL-1637-S**      **Depth (cm):** 1516  
**Age:** 9108 $\pm$ 65      **Corr. Age:** 8708 $\pm$ 65      **Material:** Mollusc  
**Weight (mg):** 10      **Genus:** *Nucculana*      **Species:** *buccata*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.40  
**Contributor:** Jennings

**Lab ID:** AA43354      **GRL-1638-S**      **Depth (cm):** 1807  
**Age:** 9514 $\pm$ 81      **Corr. Age:** 9114 $\pm$ 81      **Material:** Mollusc  
**Weight (mg):** 14.4      **Genus:** *Nucculana*      **Species:** *buccata*

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.80  
**Contributor:** Jennings

**Lab ID:** AA43355      **GRL-1639-S**      **Depth (cm):** 1908  
**Age:** 9747 $\pm$ 76      **Corr. Age:** 9347 $\pm$ 76      **Material:** Mollusc  
**Weight (mg):** 20      **Genus:** *Nucculana*      **Species:** *buccata*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.40  
**Contributor:** Jennings

**Lab ID:** AA43356      **GRL-1640-S**      **Depth (cm):** 2006  
**Age:** 9803 $\pm$ 64      **Corr. Age:** 9403 $\pm$ 64      **Material:** Mollusc  
**Weight (mg):** 27      **Genus:** *Nucculana*      **Species:** *buccata*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.80  
**Contributor:** Jennings

**Lab ID:** AA43357      **GRL-1641-S**      **Depth (cm):** 2140  
**Age:** 10034 $\pm$ 69      **Corr. Age:** 9634 $\pm$ 69      **Material:** Mollusc  
**Weight (mg):** 14.1      **Genus:** *Nucculana*      **Species:** *buccata*  
**Contributor:** Jennings

**Lab ID:** AA43358      **GRL-1642-S**      **Depth (cm):** 2342  
**Age:** 10293 $\pm$ 77      **Corr. Age:** 9893 $\pm$ 77      **Material:** Mollusc  
**Weight (mg):** 27      **Genus:** *Nucculana*      **Species:** *buccata*  
**Contributor:** Jennings

**Lab ID:** AA43359      **GRL-1643-S**      **Depth (cm):** 2436  
**Age:** 10442 $\pm$ 82      **Corr. Age:** 10042 $\pm$ 82      **Material:** Mollusc  
**Weight (mg):** 18.8      **Genus:** *Nucculana*      **Species:** *buccata*  
**Contributor:** Jennings

**Lab ID:** AA36608      **GRL-1564-S**      **Depth (cm):** 2636  
**Age:** 11125 $\pm$ 80      **Corr. Age:** 10725 $\pm$ 80      **Material:** Foraminifera  
**Weight (mg):** 6.1  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -4.10  
**Contributor:** Jennings

**Sample Notes:** Mixed benthic forams: 69 *N. labradorica*; 31 *G. auriculata*; 14 *Q. seminulum*

## EAST GREENLAND SLOPE

**Core:** HU93030-007

**Location:** Denmark Strait, south of mouth of the trough

**Lat.:** 65°1.39'

**Long.:** -30°14.81'

**Depth (mwd):** 1802

**Lab ID:** AA17389

**GRL:** 1167-S

**Depth (cm):** 45

**Age:** 15760±140

**Corr. Age:** 15210±140

**Material:** Foraminifera

**Weight (mg):** 12.57

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 0.30

**Contributor:** Cooper

**Sample Notes:** 800 Specimens

**Lab ID:** AA35170

**GRL:** 1535-S

**Depth (cm):** 572-576

**Age:** 25360±240

**Corr. Age:** 24910±240

**Material:** Foraminifera

**Weight (mg):** 7

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -0.11

**Contributor:** Barber

**Sample Notes:** 1100 *Neogloboquadrina pachyderma* (sinistral)

**Stratigraphy:** Date is from hemipelagic mud immediately underlying a dark-grey, IRD-rich diamict.

**Significance:** This date, and the overlying black layer, are close in age to that of Heinrich layer 3 in the North Atlantic, yet no obvious Detrital Carbonate layer is observed near this level of the core. This observation supports the idea that the pattern of ice advance during H-3 differed from that of H-2.

**Lab ID:** AA35171

**GRL:** 1536-S

**Depth (cm):** 680-684

**Age:** 32000±600

**Corr. Age:** 31550±600

**Material:** Foraminifera

**Weight (mg):** 5.5

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 0.12

**Contributor:** Barber

**Sample Notes:** 800 *Neogloboquadrina pachyderma* (sinistral)

**Stratigraphy:** Date is from hemipelagic mud immediately underlying a partially laminated, chalky grey-to-light brown, detrital carbonate-rich (DC) layer containing some IRD clasts.

**Significance:** Constrains sedimentation rates in this core. This date and the overlying DC layer, are close in age to that of Heinrich layer 4 in the North Atlantic; alternatively, this DC layer could relate to H-3. There is a slight possibility that the reported age is in error (too young) due to the low sample weight. If the date is erroneously young, then the DC layer is more likely to correlate with H-4.

**Reference:** Andersen et al., 1998a.

**Core:** MD99-2260

**Location:** East Greenland slope - Southern Denmark Strait, same site as HU93030-007

**Lat.:** 65°1.31'

**Long.:** -30°14'

**Depth (mwd):** 1865

**Lab ID:** AA43349

**GRL:** 1633-S

**Depth (cm):** 10-12

**Age:** 16230±150

**Corr. Age:** 15680±150

**Material:** Foraminifera

**Weight (mg):** 8      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -0.20

**Contributor:** Jennings

**Sample Notes:** 700 specimens

**Significance:** Represents a close to the top date. This core was taken from the same location as HU-030-007 which has a top date of 14k.

**Lab ID:** AA352154      **GRL-1555-S**      **Depth (cm):** 667

**Age:** 26120<sub>+340</sub>      **Corr. Age:** 25570<sub>+340</sub>      **Material:** shell

**Weight (mg):** 13.6      **Genus:** *Nucula*

**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 2.35

**Contributor:** Jennings

**Sample Notes:** 4 valves

**Lab ID:** AA35173      **GRL-1539-S**      **Depth (cm):** 893

**Age:** 30230<sub>+370</sub>      **Corr. Age:** 29680<sub>+370</sub>      **Material:** Mollusc

**Weight (mg):** 41.9

**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 1.72

**Contributor:** Jennings

**Sample Notes:** Intact gastropod

**Stratigraphy:** The core consists of 12 meters of weakly stratified muddy sand, sandy mud, silty clay and clayey silt with dropstones and shells overlying 18 meters of debris flow deposits which are massive dark gray mud and pebble mixtite.

**Significance:** The top 12 meters represent glacial marine sedimentation. The debris flow deposits are associated with glacial ice on the outer Greenland shelf during the Weichselian (Stein, 1996; Andrews et al., 1998a).

**Lab ID:** AA43350      **GRL-1634-S**      **Depth (cm):** 1155-1156

**Age:** 32040<sub>+850</sub>      **Corr. Age:** 31490<sub>+850</sub>      **Material:** Foraminifera

**Weight (mg):** 8.7      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 0.00

**Contributor:** Jennings

**Sample Notes:** 862specimens

**Stratigraphy:** This date is from the sediment directly above the change from glacial marine sediments to the debris flow deposits.

**Significance:** This dates indicates the cessation of debris flows onto this site from the east Greenland slope.

## LABRADOR SEA

<b>Core: HU87033-015</b>		
<b>Location:</b> Eastern Labrador shelf, off Saglek Fjord		
<b>Lat.:</b> 58°45.83'	<b>Long.:</b> -62°15.39'	<b>Depth (mwd):</b> 188

**Lab ID:** AA17400      **GRL-1180-S**      **Depth (cm):** 480-509  
**Age:** 10860±80      **Corr. Age:** 10410±80      **Material:** Mollusc  
**Weight (mg):** 137      **Genus:** *Macoma*      **Species:** *calcarea*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -0.24  
**Contributor:** Hall

**Significance:** This giant piston core was recovered from a basin on the northern Labrador shelf. 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 are in keeping with other dates obtained from cores in Karlsefni Trough .

**Reference:** Veldhuyzen, 1981; Hall, et al., 1999

<b>Core: HU87033-017LCF</b>		
<b>Location:</b> Cartwright Saddle		
<b>Lat.:</b> 54°36.99'	<b>Long.:</b> -56°10.6'	<b>Depth (mwd):</b> 514

**Lab ID:** AA16746      **GRL-1144-S**      **Depth (cm):** 66-70  
**Age:** 1610±60      **Corr. Age:** 1160±60      **Material:** Foraminifera  
**Weight (mg):** 7.4      **Genus:** *Nonionellina*      **Species:** *labradorica*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -1.37  
**Contributor:** Hall/Andrews/Jennings

**Sample Notes:** 275 specimens

**Stratigraphy:** Date is from post-glacial, bioturbated gray mud.

**Significance:** Constrains postglacial sedimentation rates at the core site.

**Lab ID:** AA16747      **GRL-1145-S**      **Depth (cm):** 396-400  
**Age:** 8000±90      **Corr. Age:** 7550±90      **Material:** Foraminifera  
**Weight (mg):** 4  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -0.97  
**Contributor:** Hall/Andrews/Jennings

**Sample Notes:** 292 *Nonionellina labradorica*; 39 *Globobullimina auriculata arctica*; 32 *Melonis zaandamae*

**Stratigraphy:** Date is from bioturbated gray mud, about 50 cm above the contact of this unit with the underlying stratified, dropstone-rich gray glacial-marine mud

**Significance:** Constrains timing of glacial/postglacial sediment transition at the core site..

**Lab ID:** AA16748      **GRL-1146-S**      **Depth (cm):** 743-747  
**Age:** 9110±75      **Corr. Age:** 8660±75      **Material:** Foraminifera

**Weight (mg):** 6.6      **Genus:** *Nonionellina*      **Species:** *labradorica*  
 **$\delta^{13}\text{C}$ :** Measured       **$\delta^{13}\text{C}$ :** -1.93  
**Contributor:** Hall/Andrews/Jennings  
**Sample Notes:** 315 specimens  
**Stratigraphy:** Date is from stratified gray glacial-marine mud with dropstones.  
**Significance:** Constrains sedimentation rates and timing of a change in detrital carbonate content near this level of the core.

**Lab ID:** AA16750      **GRL-1148-S**      **Depth (cm):** 1228-1232  
**Age:** 10155 $\pm$ 80      **Corr. Age:** 9705 $\pm$ 80      **Material:** Mollusc  
**Weight (mg):** 13.8      **Genus:** *Yoldiella*      **Species:**  
 **$\delta^{13}\text{C}$ :** Measured       **$\delta^{13}\text{C}$ :** 1.70  
**Contributor:** Hall/Andrews/Jennings  
**Sample Notes:** 1 valve of paired shell  
**Stratigraphy:** Date is from stratified, dropstone-rich gray mud, about 1 meter above the core base.  
**Significance:** Dates the lower portion of the core. Constrains sedimentation rates.  
**Reference:** Andrews et al., 1999

<b>Core: HU87033-018LCF</b>		
<b>Location:</b> Cartwright Saddle		
<b>Lat.:</b> 54°47.71'	<b>Long.:</b> -56°3.05'	<b>Depth (mwd):</b> 460

**Lab ID:** AA16751      **GRL-1149-S**      **Depth (cm):** 696-700  
**Age:** 8705 $\pm$ 95      **Corr. Age:** 8255 $\pm$ 95      **Material:** Mollusc  
**Weight (mg):** 14.9      **Genus:** *Yoldiella*      **Species:**  
 **$\delta^{13}\text{C}$ :** Measured       **$\delta^{13}\text{C}$ :** 0.90  
**Contributor:** Andrews/Hall/Jennings  
**Sample Notes:** 1 valve (of a pair) submitted.  
**Stratigraphy:** In hemipelagic mud near a detrital carbonate-rich unit.  
**Significance:** Constrains sedimentation rate and timing of glacial/postglacial sediment facies transition.  
**Reference:** Andrews et al., 1999

<b>Core: HU97048-007PC</b>		
<b>Location:</b> SE Baffin Island slope, SE of the mouth of Cumberland Sound		
<b>Lat.:</b> 62°40.383'	<b>Long.:</b> -60°34.388'	<b>Depth (mwd):</b> 945

**Lab ID:** AA35170      **GRL-1535-S**      **Depth (cm):** 572-574  
**Age:** 25,360 $\pm$ 240      **Corr. Age:** 24910 $\pm$ 240      **Material:** Foraminifera  
**Weight (mg):** 7      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)  
 **$\delta^{13}\text{C}$ :** Measured       **$\delta^{13}\text{C}$ :** -1.11  
**Contributor:** Barber  
**Sample Notes:** 1100 specimens  
**Stratigraphy:** Date is from hemipelagic mud immediately underlying a dark-grey, IRD-rich diamict.

**Significance:** This date, and the overlying black layer, are close in age to that of Heinrich layer 3 in the North Atlantic, yet no obvious Detrital Carbonate layer is observed near this level of the core. This observation supports the idea that the pattern of ice advance during H-3 differed from that of H-2.

**Lab ID:** AA35171      **GRL-1536-S**      **Depth (cm):** 680-684  
**Age:** 32000 $\pm$ 600      **Corr. Age:** 31550 $\pm$ 600      **Material:** Foraminifera  
**Weight (mg):** 5.5      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : .12

**Contributor:** Barber

**Sample Notes:** 800 *N. pachyderma* sinistral submitted

**Stratigraphy:** Date is from hemipelagic mud immediately underlying a partially laminated, chalky grey-to-light brown, detrital carbonate-rich (DC) layer containing some IRD clasts.

**Significance:** Constrains sedimentation rates in this core. This date, and the overlying DC layer, are close in age to that of Heinrich layer 4 in the North Atlantic; alternatively, this DC layer could relate to H-3. There is a slight possibility that the reported age is in error (too young) due to the low sample weight. If the date is erroneously young, then the DC layer is more likely to correlate with H-4.

**Reference:** Barber, 2001; Andrews and Barber, 2002

**Core: IMP 76-2-1**

**Location:** NW Labrador Sea, slope off Cumberland Sound

**Lat.:** 63°20.55'      **Long.:** -59°10.58'      **Depth (mwd):** 920

**Lab ID:** AA17381      **GRL-1158-S**      **Depth (cm):** 105  
**Age:** \*12,470 $\pm$ 190      **Corr. Age:** 12020 $\pm$ 190      **Material:** Foraminifera  
**Weight (mg):** 2.8      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.30

**Contributor:** Andrews

**Sample Notes:** 450 *N. pachyderma* sinistral

\*mass-corrected age; uncorrected age was 12,065  $\pm$  125

**Lab ID:** AA17382      **GRL-1159-S**      **Depth (cm):** 417.5  
**Age:** \*27,210 $\pm$ 500      **Corr. Age:** 26760 $\pm$ 500      **Material:** Foraminifera  
**Weight (mg):** 6.1      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.50

**Contributor:** Andrews

**Sample Notes:** 820 specimens submitted

\*mass-corrected age; uncorrected age was 26,410  $\pm$  370

**Lab ID:** AA17383      **GRL-1160-S**      **Depth (cm):** 796.5  
**Age:** \*39,920 $\pm$ 1850      **Corr. Age:** 39470 $\pm$ 1850      **Material:** Foraminifera  
**Weight (mg):** 12.5      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.20

**Contributor:** Andrews

**Sample Notes:** 1000 specimens submitted



**Reference:** Andrews et al., 1998c

\*mass-corrected age; uncorrected age was  $37,660 \pm 1070$

**Core: MD99-2236**

**Location:** Cartwright Saddle, collected near HU8703-018

**Lat.:** 54°37'

**Long.:** -56°10.57'

**Depth (mwd):** 520

**Lab ID:** AA37285

**GRL-1578-S**

**Depth (cm):** 1707-1711

**Age:** 10572 $\pm$ 85

**Corr. Age:** 10172 $\pm$ 85

**Material:** Mollusc

**Weight (mg):** 27.1

**Contributor:** Barber

**Reference:** Andrews, 1999

**Lab ID:** AA37284

**GRL-1575-S**

**Depth (cm):** 1727-1731

**Age:** 10403 $\pm$ 75

**Corr. Age:** 10003 $\pm$ 75

**Material:** Mollusc

**Weight (mg):** 72

**Genus:** *Portlandia*

**Species:** *arctica*

**Contributor:** Barber

## NORTHERN ICELAND SHELF

**Core: B997-311GGC**

**Location:** Ísafjardardjúp, Jökulfirðir, fjord n. of the main Ísafjörður fed by Drangajökull Cap

**Lat.:** 66°16.4'

**Long.:** -22°51.4'

**Depth (mwd):** 100

**Lab ID:** AA44324

**GRL-1649-S**

**Depth (cm):** 22

**Age:** 1281<sub>+42</sub>

**Corr. Age:** 881<sub>+42</sub>

**Material:** Mollusc

**Weight (mg):** 28

**Genus:** *Macoma*

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 0.50

**Contributor:** Andrews

**Sample Notes:** Part of a valve with periostocum still attached.

**Stratigraphy:** From core catcher

**Lab ID:** CURL5891

**GRL-1626-S**

**Depth (cm)** 27

**Age:** 955<sub>+35</sub>

**Corr. Age:** 555<sub>+35</sub>

**Material:** Mollusc

**Weight (mg):** 200

**Genus:** *Mya*

**Species:** cf *truncata*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 0.50

**Contributor:** Andrews

**Stratigraphy:** From core catcher

**Lab ID:** CURL5836

**GRL-1624-S**

**Depth (cm):** 65

**Age:** 6830<sub>+45</sub>

**Corr. Age:** 6430<sub>+45</sub>

**Material:** Mollusc

**Weight (mg):**

**Genus:** *Mya*

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 0.22

**Contributor:** Andrews

**Stratigraphy:** From core catcher

**Lab ID:** CURL5837

**GRL-1625-S**

**Depth (cm):** 108

**Age:** 9950<sub>+55</sub>

**Corr. Age:** 9550<sub>+55</sub>

**Material:** Mollusc

**Weight (mg):**

**Genus:** *Mya*

**Species:** *truncata*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 1.09

**Contributor:** Andrews

**Lab ID:** CURL5897

**GRL-1627-S**

**Depth (cm):** 138

**Age:** 5700<sub>+35</sub>

**Corr. Age:** 5300<sub>+35</sub>

**Material:** Mollusc

**Weight (mg):** 54

**Genus:** *Dentalium*

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -0.40

**Contributor:** Andrews

**Stratigraphy:** From core catcher

**Significance:** This date indicates a relatively slow rate of sediment accumulation in this branch fjord to the main Ísafjardardjúp trough. However, this date can be compared with the much younger date at the base of B997-341PC (this report; Webster, 2003).

**Lab ID:** CURL5838

**GRL-1626-S**

**Depth (cm):** 265

**Age:** 10200<sub>+55</sub>

**Corr. Age:** 9800<sub>+55</sub>

**Material:** Mollusc

**Weight (mg):**

**Genus:** *Balanus*

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 1.40

**Contributor:** Andrews

**Core: B997-315PC**

**Location:** Outer Djúpáll

**Lat.:** 66°43.96'

**Long.:** -24°20.13'

**Depth (mwd):** 220

**Lab ID:** CURL5894

**GRL-1630-S**

**Depth (cm):** 60

**Age:** 9510 $\pm$ 45

**Corr. Age:** 9110 $\pm$ 45

**Material:** Mollusc

**Weight (mg):** 200

**Genus:** *Dentalium*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 0.54

**Contributor:** Andrews

**Lab ID:** CURL5895

**GRL-1631-S**

**Depth (cm)** 250

**Age:** 10850 $\pm$ 55

**Corr. Age:** 10450 $\pm$ 55

**Material:** Mollusc

**Weight (mg):** 35

**Genus:** *Nuculana*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 1.70

**Contributor:** Andrews

**Reference:** Andrews et al., 2002

**Core: B997-317PC**

**Location:** North Iceland shelf, Eyjafjardaráll

**Lat.:** 66°35.27'

**Long.:** -18°51.9'

**Depth (mwd):** 494

**Lab ID:** AA44321

**GRL-1646-S**

**Depth (cm):** 178.75-181.25

**Age:** 11040 $\pm$ 170

**Corr. Age:** 10640 $\pm$ 170

**Material:** Foraminifera

**Weight (mg):** 1.4

**Genus:**

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -1.84

**Contributor:** Kristjánsdóttir

**Sample Notes:** Mixed benthics: 65 *Islandiella norcrossi*, 105 *Melonis barleeanus*, 45 *Nonionellina labradorica*, 12 *Stainforthia feyling*.

**Stratigraphy:** In glacial marine mud, approximately 20 cm below the transitional zone and below the first rhyolitic tephra peak in order to get away from possible bioturbation of younger material into the glacial marine mud.

**Significance:** Need a better date for the top of the glacial marine mud. Previous dates give conflicting evidence. 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 in the early Holocene. Because of apparent erosion associated with gravity flow events, the onset of modern marine sedimentation cannot be ascertained.

**Core Summary:** 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. The glacial marine mud is stiff, grey with higher magnetic susceptibility, low carbon content and IRD. 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.

**Reference:** Kristjánsdóttir, 1999; Andrews et al., 2000; Kristjánsdóttir, et al, in prep; Castaneda et al. in review.

**Core: B997-324 PC1**

<b>Location:</b> Head of Reykjafjardaráll	<b>Lat.:</b> 66°31.426'	<b>Long.:</b> -21°9.13'
		<b>Depth (mwd):</b> 282

<b>Lab ID:</b> NSRL12567	<b>GRL-1620-S</b>	<b>Depth (cm):</b> 30-32
<b>Age:</b> 1800 $\pm$ 30	<b>Corr. Age:</b> 1400 $\pm$ 30	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 1952	<b>Genus:</b> <i>Astarte</i>	<b>Species:</b> <i>borealis</i>
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : 2.60	

**Significance:** Core B997-324 PC1 recovered high-resolution Holocene marine sediments, with highest sediment accumulation in the early Holocene (late Younger Dryas to Preboreal).

**Reference:** Smith, 2001; Andrews et al., 2000; Castaneda et al., in press

<b>Lab ID:</b> NSRL12568	<b>GRL-1621-S</b>	<b>Depth (cm):</b> 120-122
<b>Age:</b> 7200 $\pm$ 40	<b>Corr. Age:</b> 6800 $\pm$ 40	<b>Material:</b> Foraminifera
<b>Weight (mg):</b> 6.3	<b>Genus:</b> <i>Uvigerina</i>	<b>Species:</b> <i>mediteranea</i>
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : 0.00	

**Sample Notes:** 95 *Uvigerina mediteranea*

**Significance:** Sample will test hypothesis of possible hiatus between 115-140 cm in the core.

<b>Lab ID:</b> NSR12569	<b>GRL-1622-S</b>	<b>Depth (cm):</b> 130-132
<b>Age:</b> 9070 $\pm$ 45	<b>Corr. Age:</b> 8670 $\pm$ 45	<b>Material:</b> Foraminifera
<b>Weight (mg):</b> 7.2	<b>Genus:</b> <i>Globobulimina</i>	<b>Species:</b> <i>auriculata</i>
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : 1.70	

**Sample Notes:** 105 *G.auriculata*

**Significance:** Sample will test hypothesis of possible hiatus between 115-140 cm in the core.

<b>Lab ID:</b> CURL5305	<b>GRL-1603-S</b>	<b>Depth (cm):</b> 140-142
<b>Age:</b> 9510 $\pm$ 55	<b>Corr. Age:</b> 9110 $\pm$ 55	<b>Material:</b> Foraminifera
<b>Weight (mg):</b> 7	<b>Genus:</b> <i>Nonionellina</i>	<b>Species:</b> <i>labradorica</i>
$\delta^{13}\text{C}$ :	$\delta^{13}\text{C}$ :	

**Significance:** These dates were obtained to confirm the presence of a hiatus in the core.

One of these dates is clearly wrong.

**Reference:** Andrews and Cartee-Schoolfield (2003); Cartee-Schoolfield (2000). Other dates from this core are listed in Smith and Licht, 2000, p.52-54.

<b>Lab ID:</b> CURL5304	<b>GRL-1602-S</b>	<b>Depth (cm):</b> 178.75-181.257
<b>Age:</b> 3580 $\pm$ 40	<b>Corr. Age:</b> 3180 $\pm$ 40	<b>Material:</b> Foraminifera
<b>Weight (mg):</b> 6.1	<b>Genus:</b>	<b>Species:</b>
$\delta^{13}\text{C}$ :	$\delta^{13}\text{C}$ :	

**Sample Notes:** Four species benthics: *Globobulimina auriculata*, *N. labradorica*, *U. peregrina*, *M. zaandamae*.

**Core Summary:** 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 of only tephra.

**Core: B997-326 PC1****Location:** NW Iceland continental shelf, Húnaflóaáll**Lat.:** 66°36.35'**Long:** -20°54.82'**Depth (mwd):** 358**Lab ID:** AA40085**GRL:** 1597-S**Depth (cm):** 180-184**Age:** 13835±215**Corr. Age:** 13435±215**Material:** Foraminifera**Weight (mg):** 2.8 $\delta^{13}\text{C}$ : Measured $\delta^{13}\text{C}$ : -3.50**Contributor:** James

**Sample Notes:** Mixed benthic and planktic foraminifera. 38 *Islandiella norcrossi*, 11 *Melonis barleeanus* (formerly *zaandamae*), 10 *Cibicides lobatulus*, 7 *Nonionellina labradorica*, 88 *Cassidulina reniforme*, 20 *Pullenia bulloides*, 55 *Cassidulina neoteretis*, 142 *Neoglobigerina pachyderma* (sin), 26 *Elphidium excavatum clavata*, 17 *Stainforthia concava*, 3 *Islandiella sp*, 1 *Buccella tenerrima*, 1 *Lagena sp*, and 1 unidentified benthic.

**Stratigraphy:** Sample taken just above the diamicton**Lab ID:** AA52349**GRL:** 1674-S**Depth (cm):** 206-210**Age:** 10200±1200**Corr. Age:** 9800±1200**Material:** Foraminifera**Weight (mg):****Genus:** *Cassidulina***Species:** *reniforme* $\delta^{13}\text{C}$ : $\delta^{13}\text{C}$ :**Sample Notes:** 800 specimens**Contributor:** Andrews

**Stratigraphy:** From diamicton unit, within percentage peak of *Cassidulina reniforme*. Below date of c. 23 ka.

**Reference:** Andrews and Helgadóttir, 2003**Core: B997-327PC****Location:** Reykjafjardaráll**Lat.:** 66°38.485'**Long.:** -20°51.79'**Depth (mwd):** 373**Lab ID:** NSRL11050**GRL:** 1553-S**Depth (cm):** 20-22**Age:** 835±55**Corr. Age:** 435±55**Material:** Mollusc**Weight (mg):** 7.9 $\delta^{13}\text{C}$ : Measured $\delta^{13}\text{C}$ : -7.60**Contributor:** Andrews**Sample Notes:** whole bivalve, unidentified**Stratigraphy:** Foraminifera extracted from sediments retained in the core catcher**Lab ID:** NSRL11048**GRL:** 1551-S**Depth (cm):** 70-72**Age:** 1140±30**Corr. Age:** 740±30**Material:** Mollusc**Weight (mg):** 9.9 $\delta^{13}\text{C}$ : Measured $\delta^{13}\text{C}$ : -7.50**Contributor:** Andrews**Sample Notes:** Unidentified mollusc

**Stratigraphy:** Foraminifera extracted from sediments retained in the core catcher. The basal date confirms the 3.5 kHz acoustic stratigraphy in-so-far as the basin fill thickens toward the center of this trough.

**Reference:** Andrews et al., 2000; Andrews et al., 2001; Andrews et al., 2001; Andrews et al., in press

**Lab ID:** NSRL11049 **GRL-1552-S** **Depth (cm):** 170-172  
**Age:** 2340 $\pm$ 80 **Corr. Age:** 1940 $\pm$ 80 **Material:** Mollusc  
**Weight (mg):** 8.4 **Genus:** *Axinopsis*  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -6.60  
**Contributor:** Andrews  
**Sample Notes:** whole bivalves

**Stratigraphy:** Foraminifera extracted from sediments retained in the core catcher

**Core Summary:** 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). We obtained a 25 m piston core (MD99-2269) at this site in 1999 as part of the international IMAGES V cruise on the French R/V Marion.

**Core: B997-329PC**

**Location:** NW Iceland continental shelf, Reykjarfjörður

**Lat.:** 65°58' **Long.:** -21°17' **Depth (mwd):** 111

**Lab ID:** NSRL11687 **GRL-1579-S** **Depth (cm):** 0-2  
**Age:** modern **Corr. Age:** **Material:** Mollusc  
**Weight (mg):** 169.6 **Genus:** *Nuculana* **Species:** *pernula*  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : 0.90  
**Contributor:** Castaneda

**Lab ID:** CURL5795 **GRL-1617-S** **Depth (cm):** 10-12  
**Age:** 1880 $\pm$ 30 **Corr. Age:** 1480 $\pm$ 30 **Material:** Mollusc  
**Weight (mg):** 447.8  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : 1.90  
**Contributor:** Castaneda  
**Sample Notes:** shell fragments

**Lab ID:** CURL5797 **GRL-1618-S** **Depth (cm):** 24-26  
**Age:** 5270 $\pm$ 35 **Corr. Age:** 4870 $\pm$ 35 **Material:** Mollusc  
**Weight (mg):** 118.8  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -0.01  
**Contributor:** Castaneda  
**Sample Notes:** shell fragments

**Lab ID:** CURL5798 **GRL-1619-S** **Depth (cm):** 50-52  
**Age:** 7100 $\pm$ 40 **Corr. Age:** 6700 $\pm$ 40 **Material:** Mollusc  
**Weight (mg):** 94.9  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -0.17  
**Contributor:** Castaneda

**Sample Notes:** shell fragments

**Reference:** Castaneda, 2001

**Lab ID:** CURL5439 **GRL-1598-S** **Depth (cm):** 74-76  
**Age:** 8340 $\pm$ 95 **Corr. Age:** 7940 $\pm$ 95 **Material:** Mollusc  
**Weight (mg):** 590 **Genus:** *Astarte*  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -1.20  
**Contributor:** Castaneda

**Lab ID:** CURL5436 **GRL-1599-S** **Depth (cm):** 84-86  
**Age:** 8810 $\pm$ 50 **Corr. Age:** 8410 $\pm$ 50 **Material:** Mollusc  
**Weight (mg):** 0.53 **Genus:** *Astarte* **Species:** *borealis*  
 $\delta^{13}\text{C}$ : Assumed  $\delta^{13}\text{C}$ : 0.00

**Contributor:** Castaneda

**Significance:** These two dates indicate that at this site there is approximately 17 m of Holocene sediment.

**Lab ID:** NSRL11688 **GRL-1580-S** **Depth (cm):** 180-182  
**Age:** 9400 $\pm$ 55 **Corr. Age:** 9000 $\pm$ 55 **Material:** Mollusc  
**Weight (mg):** 9.9  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -1.60

**Contributor:** Castaneda

**Sample Notes:** Bivalve fragments

**Lab ID:** NSRL11554 **GRL-1576-S** **Depth (cm):** 400-402  
**Age:** 9840 $\pm$ 70 **Corr. Age:** 9480 $\pm$ 70 **Material:** Mollusc  
**Weight (mg):** 5.1

**Contributor:** Castaneda

**Sample Notes:** Bivalve fragments

**Core Summary:** This core contains three lithofacies: a basal olive black clay unit, an olive black silty clay unit, and an olive black sand on top. There is a distinct change in the sedimentation rate at 85cm corresponding to the lithofacies change from sand to silty clay. Sedimentation rates range from 0.19m/kyr for 0-85cm to 3.9m/kyr below 85cm. The age of this contact is 8410  $\pm$  50 yr BP. The Saksunarvatn Tephra is present in this core at 200-220cm. The age above this ash of approximately 9000 yr BP confirms the presence of this tephra. There is a second basaltic ash layer at 350cm, but the origin of this tephra is unknown.

**Reference:** Castaneda, 2001

**Core: B997-330PC**

**Location:** Sveinbjarnargrunn

**Lat.:** 65°52'

**Long.:** -21°4.9'

**Depth (mwd):** 165

**Lab ID:** AAR5251 **GRL-1521-S** **Depth (cm):** 35  
**Age:** 1105 $\pm$ 40 **Corr. Age:** 705 $\pm$ 40 **Material:** Mollusc  
**Weight (mg):** 46.4 **Genus:** *Nuculana* **Species:** *pernula*  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -0.22  
**Contributor:** Andrews

**Lab ID:** AAR5250    **GRL-1522-S**    **Depth (cm):** 110  
**Age:** 2085 $\pm$ 40    **Corr. Age:** 1685 $\pm$ 40    **Material:** Mollusc  
**Weight (mg):** 106.8    **Genus:** *Nuculana*    **Species:** *pernula*  
 $\delta^{13}\text{C}$ : Measured     $\delta^{13}\text{C}$ : 0.16  
**Contributor:** Andrews

**Lab ID:** AAR5249    **GRL-1523-S**    **Depth (cm):** 143  
**Age:** 2610 $\pm$ 40    **Corr. Age:** 2210 $\pm$ 40    **Material:** Mollusc  
**Weight (mg):** 77.7    **Genus:** *Macoma*  
 $\delta^{13}\text{C}$ : Measured     $\delta^{13}\text{C}$ : -2.50  
**Contributor:** Andrews

**Lab ID:** AAR5248    **GRL-1524-S**    **Depth (cm):** 230  
**Age:** 3455 $\pm$ 105    **Corr. Age:** 3055 $\pm$ 105    **Material:** Mollusc  
**Weight (mg):** 123.8    **Genus:** *Nuculana*  
 $\delta^{13}\text{C}$ : Measured     $\delta^{13}\text{C}$ : 0.50  
**Contributor:** Andrews  
**Sample Notes:** broken valve, id. tentative  
**Reference:** 3.5 kHz record in Andrews et al., in press.; Helgadóttir, 1997

**Lab ID:** AAR5247    **GRL-1525-S**    **Depth (cm):** 301  
**Age:** 4425 $\pm$ 65    **Corr. Age:** 4025 $\pm$ 65    **Material:** Mollusc  
**Weight (mg):** 431.5    **Genus:** *Astarte*  
 $\delta^{13}\text{C}$ : Measured     $\delta^{13}\text{C}$ : 2.20  
**Contributor:** Andrews  
**Sample Notes:** broken shell, heavily ribbed margin  
**Reference:** 3.5 kHz record in Andrews et al., in press.; Helgadóttir, 1997

**Lab ID:** AA41840    **GRL-1604-S**    **Depth (cm):** 465  
**Age:** 8732 $\pm$ 55    **Corr. Age:** 8332 $\pm$ 55    **Material:** Foraminifera  
**Weight (mg):** 8.4    **Genus:** *Nonionellina*    **Species:** *labradorica*  
 $\delta^{13}\text{C}$ : Measured     $\delta^{13}\text{C}$ : 1.60  
**Contributor:** Andrews  
**Sample Notes:** 250 *Nonionellina labradorica*, basal date from sediments retained in the core catcher.  
**Core Summary:** 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.  
**Reference:** Andrews 2001; Andrews and Giraudeau, 2003l; Helgadóttir, 1997.

<b>Core: B997-331PC</b>		
<b>Location:</b> Húnaflói		
<b>Lat.:</b> 66°4.095'	<b>Long.:</b> -21°38.422'	<b>Depth (mwd):</b> 46

**Lab ID:** NSRL11555    **GRL-1577-S**    **Depth (cm):** 134-136  
**Age:** 3630 $\pm$ 35    **Corr. Age:** 3230 $\pm$ 35    **Material:** Mollusc  
**Weight (mg):** 201    **Genus:** *Astarte*    **Species:** *subequilatera*



$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.10  
**Contributor:** Castaneda

**Lab ID:** NSRL11464 **GRL-1569-S**      **Depth (cm):** 190-192  
**Age:** 4080 $\pm$ 80      **Corr. Age:** 3680 $\pm$ 80      **Material:** Mollusc  
**Weight (mg):**      **Genus:** *Astarte*      **Species:** *undata*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.10  
**Contributor:** Castaneda

**Core Summary:** This core contains one sandy shell hash lithofacies. There is a linear sedimentation rate.

**Reference:** Castaneda, 2001

**Core: B997-332PC**

**Location:** Ingólfssfjörður

**Lat.:** 66°8.059'

**Long.:** -21°38.422'

**Depth (mwd):** 108

**Lab ID:** NSRL11689 **GRL-1581-S**      **Depth (cm):** 0-2  
**Age:** 600 $\pm$ 55      **Corr. Age:** 200 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 180.2      **Genus:** *Yoldia*      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.80  
**Contributor:** Castaneda

**Lab ID:** NSRL11148 **GRL-1546-S**      **Depth (cm):** 23  
**Age:** 3340 $\pm$ 35      **Corr. Age:** 2940 $\pm$ 35      **Material:** Mollusc  
**Weight (mg):** 55.8      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.60  
**Contributor:** Castaneda

**Lab ID:** NSRL11690 **GRL-1582-S**      **Depth (cm):** 144-146  
**Age:** 8900 $\pm$ 60      **Corr. Age:** 8500 $\pm$ 60      **Material:** Mollusc  
**Weight (mg):** 24.2      **Genus:** *trachyardium*      **Species:** *muricatum*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.30  
**Contributor:** Castaneda

**Lab ID:** AA35179      **GRL-1547-S**      **Depth (cm):** 155  
**Age:** 8605 $\pm$ 65      **Corr. Age:** 8205 $\pm$ 65      **Material:** Mollusc  
**Weight (mg):** 15.8      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.13  
**Contributor:** Castaneda

**Lab ID:** AA35180      **GRL-1548-S**      **Depth (cm):** 242  
**Age:** 9480 $\pm$ 70      **Corr. Age:** 9080 $\pm$ 70      **Material:** Mollusc  
**Weight (mg):** 65      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.25  
**Contributor:** Castaneda

**Lab ID:** NSRL11149 **GRL-1549-S**      **Depth (cm):** 355

**Age:** 9920 $\pm$ 55      **Corr. Age:** 9520 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 166      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.80  
**Contributor:** Castaneda

**Lab ID:** NSRL11150 GRL-1550-S      **Depth (cm):** 519  
**Age:** 10300 $\pm$ 60      **Corr. Age:** 9900 $\pm$ 60      **Material:** Mollusc  
**Weight (mg):** 63.8      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -4.80  
**Contributor:** Castaneda

**Core Summary:** This core contains an olive black sandy silt lithofacies over an olive black silty clay unit. The contact is at 150cm, and the age is between 9457 and 9014 yr BP. There is a distinct change in the sedimentation rate at the contact. Above the contact, the sedimentation rate is approximately .078m/kyr, and below the contact the sedimentation rate averages to 2.6m/kyr. There is good age control on the sediments younger than 8ka, but the chronology older than 8ka is based on only two dates. Oxygen isotope data suggest that the sedimentation rate is nonlinear. The Saksunarvatn tephra is present in this core, which is confirmed by the date on shell fragments at 242cm.

**Reference:** Castaneda, 2001

**Core: B997-339PC2**

**Location:** NW Iceland, Skotufjordur  
**Lat.:** 66°1.1056'      **Long.:** -22°48.0381'      **Depth (mwd):** 104

**Lab ID:** AAR5504      GRL-1557-S      **Depth (cm):** 40-41.5  
**Age:** 4530 $\pm$ 55      **Corr. Age:** 4130 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 43.8      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.05  
**Contributor:** Andrews  
**Sample Notes:** Bivalve

**Lab ID:** AAR5503      GRL-1558-S      **Depth (cm):** 80-81.5  
**Age:** 6000 $\pm$ 55      **Corr. Age:** 5600 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 43.8      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.05  
**Contributor:** Andrews  
**Sample Notes:** Bivalve

**Reference:** All the data on this core have yet to be finalized, but see Geirsdóttir et al., 2002.

**Core: B997-341PC3**

**Location:** NW Iceland, Jökulfirðir  
**Lat.:** 66°16.62'      **Long.:** -22°50.528'      **Depth (mwd):** 96

**Lab ID:** CURL5892      GRL-1628-S      **Depth (cm):** 7  
**Age:** 610 $\pm$ 35      **Corr. Age:** 210 $\pm$ 35      **Material:** Mollusc  
**Weight (mg):** 75      **Genus:** *Nucula*      **Species:** cf *pernula* or *tenuis*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.08

**Contributor:** Andrews

**Sample Notes:** intact valve, shell extracted from sediment in the core catcher

**Lab ID:** AA51048      **GRL-1666-S**      **Depth (cm):** 32.5  
**Age:** 1006<sub>+32</sub>      **Corr. Age:** 606<sub>+32</sub>      **Material:** Mollusc  
**Weight (mg):** 7.5      **Genus:** *Nucula*      **Species:** *cf tenuis*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 1.94

**Contributor:** Andrews

**Sample Notes:** paired *Nucula cf tenuis*

**Significance:** This date indicates a rapid rate of sediment accumulation at this specific site compared with a significantly lower rate of accumulation at site 311.

**Lab ID:** AA51049      **GRL-1667-S**      **Depth (cm):** 58.5  
**Age:** 1453<sub>+62</sub>      **Corr. Age:** 1053<sub>+62</sub>      **Material:** Mollusc  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -0.10

**Contributor:** Andrews

**Lab ID:** CURL5893      **GRL-1629-S**      **Depth (cm):** 92  
**Age:** 1760<sub>+35</sub>      **Corr. Age:** 1360<sub>+35</sub>      **Material:** Mollusc  
**Weight (mg):** 85      **Genus:** *Macoma*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 0.72

**Contributor:** Andrews

**Sample Notes:** nearly whole valve, shell extracted from sediment in the core catcher

**Lab ID:** AA51142      **GRL-1671-S**      **Depth (cm):** 125.5  
**Age:** 2235<sub>+35</sub>      **Corr. Age:** 1835<sub>+35</sub>      **Material:** Mollusc  
**Weight (mg):** 32      **Genus:** *Macoma*      **Species:** *balthica*

**Contributor:** Andrews

**Sample Notes:** whole valve, high inflated valve

**Lab ID:** AA51143      **GRL-1672-S**      **Depth (cm):** 172.5  
**Age:** 2657<sub>+36</sub>      **Corr. Age:** 2257<sub>+36</sub>      **Material:** Mollusc  
**Weight (mg):** 95      **Genus:** *Macoma*      **Species:** *cf calcarea*

**Sample Notes:** Nearly whole valve

**Contributor:** Andrews

**Lab ID:**      **GRL-1666-S**      **Depth (cm):** 220  
**Age:** 2980<sub>+55</sub>      **Corr. Age:** 2580<sub>+55</sub>      **Material:** Mollusc  
**Weight (mg):** 7.5      **Genus:** *Nucula*      **Species:** *cf tenuis*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 1.94

**Contributor:** Andrews

**Sample Notes:** paired *Nucula cf tenuis*, shell extracted from sediment in the core catcher

**Reference:** Data on sediment magnetics (Webster, 2003); data on isotopic variations of foraminifera (Richter-Foley and Andrews, 2003).

**Core: MD99-2266**

**Location:** NW Iceland shelf, mouth of Ísafjardardjúp

**Lat.:** 66°13.7'

**Long.:** -23°15.93'

**Depth (mwd):** 106

<b>Lab ID:</b> AA35804	<b>GRL-1560-S</b>	<b>Depth (cm):</b> 0-3
<b>Age:</b> 780 $\pm$ 40	<b>Corr. Age:</b> 380 $\pm$ 40	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 381.2-		
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : -6.50	
<b>Contributor:</b> Andrews		
<b>Sample Notes:</b> Unidentified mollusc		
<b>Stratigraphy:</b> Core top		
<b>Lab ID:</b> AA53619	<b>GRL-1675-S</b>	<b>Depth (cm):</b> 72-74
<b>Age:</b> 1151 $\pm$ 53	<b>Corr. Age:</b> 751 $\pm$ 53	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 18.39	<b>Genus:</b> <i>Thyasira</i>	<b>Species:</b> <i>flexuosa (sarsi?)</i>
$\delta^{13}\text{C}$ :	$\delta^{13}\text{C}$ :	
<b>Lab ID:</b> AA53620	<b>GRL-1676-S</b>	<b>Depth (cm):</b> 162.5-163.5
<b>Age:</b> 1800 $\pm$ 45	<b>Corr. Age:</b> 1400 $\pm$ 45	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 5.1	<b>Genus:</b> <i>Nuculana</i>	<b>Species:</b> <i>pernula</i>
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : 0.9	
<b>Contributor:</b> Kristjánsdóttir		
<b>Sample Notes:</b> 1/2 send for dating, other half still available in sample		
<b>Stratigraphy:</b> In Holocene mud.		
<b>Lab ID:</b> AA50033	<b>GRL-1661-S</b>	<b>Depth (cm):</b> 258.5-259.5
<b>Age:</b> 2503 $\pm$ 36	<b>Corr. Age:</b> 2103 $\pm$ 36	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 111.5	<b>Genus:</b> <i>Astarte</i>	<b>Species:</b> sp.
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : -2.60	
<b>Contributor:</b> Kristjánsdóttir		
<b>Sample Notes:</b> Sent half of articulated <i>Astarte sp</i> , other half left in sample		
<b>Stratigraphy:</b> In Holocene mud.		
<b>Lab ID:</b> C5735	<b>GRL-1613-S</b>	<b>Depth (cm):</b> 689
<b>Age:</b> 5130 $\pm$ 40	<b>Corr. Age:</b> 4730 $\pm$ 40	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 54.8	<b>Genus:</b> <i>Nuculana</i>	<b>Species:</b> <i>pernula</i>
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : 1.00	
<b>Contributor:</b> Kristjánsdóttir		
<b>Sample Notes:</b> Piece of a broken valve		
<b>Stratigraphy:</b> In Holocene mud.		
<b>Lab ID:</b> AA50034	<b>GRL-1662-S</b>	<b>Depth (cm):</b> 1062-1064
<b>Age:</b> 6098 $\pm$ 50	<b>Corr. Age:</b> 5698 $\pm$ 50	<b>Material:</b> Mollusc
<b>Weight (mg):</b> 20.6	<b>Genus:</b> <i>Nuculana</i>	<b>Species:</b> <i>pernula</i>
$\delta^{13}\text{C}$ : Measured	$\delta^{13}\text{C}$ : 0.70	
<b>Contributor:</b> Kristjánsdóttir		
<b>Sample Notes:</b> 1 valve of <i>Nuculana pernula</i>		
<b>Stratigraphy:</b> In Holocene mud.		
<b>Lab ID:</b> C5736	<b>GRL-1614-S</b>	<b>Depth (cm):</b> 1267
<b>Age:</b> 6570 $\pm$ 45	<b>Corr. Age:</b> 6170 $\pm$ 45	<b>Material:</b> Mollusc

**Weight (mg):** 75      **Genus:** *Nuculana*      **Species:** *pernula*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 1.40  
**Contributor:** Kristjánsdóttir  
**Sample Notes:** Piece of 1 valve  
**Stratigraphy:** In Holocene mud.

**Lab ID:** AA50035      **GRL-1663-S**      **Depth (cm):** 1867-1869  
**Age:** 7826<sub>+49</sub>      **Corr. Age:** 7426<sub>+49</sub>      **Material:** Mollusc  
**Weight (mg):** 25.2      **Genus:** *Nuculana*      **Species:** *pernula*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 0.80  
**Contributor:** Kristjánsdóttir  
**Sample Notes:** 1 valve of *Nuculana pernula*, one half sent other left in sample  
**Stratigraphy:** In Holocene mud

**Lab ID:** AA35174      **GRL-1541-S**      **Depth (cm):** 2762  
**Age:** 8840<sub>+65</sub>      **Corr. Age:** 8440<sub>+65</sub>      **Material:** Mollusc  
**Weight (mg):** 14.9      **Genus:** *Dentalium*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 0.20  
**Reference:** Andrews et al., 2002

**Lab ID:** AA50036      **GRL-1664-S**      **Depth (cm):** 3128-3130  
**Age:** 9320<sub>+190</sub>      **Corr. Age:** 8920<sub>+190</sub>      **Material:** Mollusc  
**Weight (mg):** 9.3      **Genus:** *Nuculana*      **Species:** *pernula*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 0.00  
**Contributor:** Kristjánsdóttir  
**Sample Notes:** One half sent, one broken half left  
**Stratigraphy:** In Holocene mud.

**Lab ID:** AA35255      **GRL-1556-S**      **Depth (cm):** 3761-3763  
**Age:** 9800<sub>+70</sub>      **Corr. Age:** 9400<sub>+70</sub>      **Material:** Foraminifera  
**Weight (mg):** 4.4  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -6.33  
**Sample Notes:** 53 *Quinqueloculina seminulum* (large!), 3 *Triloculina*  
**Stratigraphy:** In Holocene mud.

**Lab ID:** AA50037      **GRL-1665-S**      **Depth (cm):** 3794.5-3796.5  
**Age:** 9804<sub>+70</sub>      **Corr. Age:** 9404<sub>+70</sub>      **Material:** Mollusc  
**Weight (mg):** 5.8  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 0.94  
**Contributor:** Kristjánsdóttir  
**Sample Notes:** Five very small unidentified bivalves, probably juveniles  
**Stratigraphy:** In Holocene mud.

**Core Summary:** Core MD99-2266 contains over 38 m of Holocene sediment. The sediment is mainly silty clay with faint to prominent laminations and a near basal date of 9804 <sub>+70</sub> BP. MD99-2266 contains an abundance of foraminifera and articulated bivalves. This core has the potential to reconstruct an extremely high resolution record of climate change during the Holocene.

**Core: MD99-2269**

**Location:** Western N Iceland shelf, Reykjafjardaráll

**Lat.:** 66°37.53'

**Long.:** -20°51.16'

**Depth (mwd):** 365

**Lab ID:** AA38584

**GRL-1583-S**

**Depth (cm):** 0-2

**Age:** 72<sub>+37</sub>

**Corr. Age:** 0

**Material:** Mollusc

**Weight (mg):** 172.2

**Genus:** *Bathyarca*

**Species:** *glacialis*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 1.15

**Sample Notes:** Paired valve, sent broken half

**Stratigraphy:** Core top.

**Lab ID:** C5732

**GRL-1610-S**

**Depth (cm):** 42-43

**Age:** 680<sub>+30</sub>

**Corr. Age:** 280<sub>+30</sub>

**Material:** Mollusc

**Weight (mg):** 185.7

**Genus:** *Arca*

**Species:** cf *glacialis*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 0.70

**Stratigraphy:** In Holocene mud

**Significance:** Requested by Koc to improve the age model near the top of the core.

**Lab ID:** C5733

**GRL-1611-S**

**Depth (cm):** 130-132

**Age:** 1010<sub>+30</sub>

**Corr. Age:** 610<sub>+30</sub>

**Material:** Mollusc

**Weight (mg):** 13.5

**Genus:** *Macoma*

**Species:** spp

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -7.80

**Contributor:** Koc

**Sample Notes:** Thin walled

**Stratigraphy:** In Holocene mud

**Significance:** Requested by Koc to improve the age model near the top of the core.

**Lab ID:** AA54589

**GRL-1677-S**

**Depth (cm):** 160-162

**Age:** 1088<sub>+59</sub>

**Corr. Age:** 688<sub>+59</sub>

**Material:** Mollusc

**Weight (mg):** 7.9

**Genus:** *Macoma*

**Species:** *balthica*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -9

**Contributor:** Kristjánsdóttir

**Sample Notes:** Two thin valves of the same mollusc. One valve bored.

**Stratigraphy:** Below basaltic tephra layer.

**Lab ID:** AA38585

**GRL-1584-S**

**Depth (cm):** 177-178

**Age:** 1226<sub>+25</sub>

**Corr. Age:** 826<sub>+25</sub>

**Material:** Mollusc

**Weight (mg):** 88.1

**Genus:** *Bathyarca*

**Species:** *glacialis*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 1.96

**Sample Notes:** Single valve, sent part of valve

**Stratigraphy:** In Holocene mud.

**Lab ID:** AA54593

**GRL-1678-S**

**Depth (cm):** 245-2471

**Age:** 535<sub>+47</sub>

**Corr. Age:** 135<sub>+47</sub>

**Material:** Foraminifera

**Weight (mg):** 2.3

**Genus:**

**Species:**

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -1.84

**Contributor:** Kristjánsdóttir

**Sample Notes:** Mixed benthic foraminifera: 56 *Islandiella norcrossi*, 13 *Elphidium excavatum* f. *clavata*, 19 *N.labradoricum*, 5 *Pullenia bulloides*, 3 *Cassidulina neoteretis*, 2 *Angulogerina fluensis*, 46 *Globobulimina*, 30 *Melonis barleeanus*, 2 *Steinforthia* sp, 1 *Cibicides lobatulus*, 17 *N. turgida*, 6 *Islandiella helenae*

**Stratigraphy:** Within rhyolitic tephra peak, most likely Hekla 1104.

**Lab ID:** AA47785      **GRL-1655-S**      **Depth (cm):** 265-267  
**Age:** 1693 $\pm$ 42      **Corr. Age:** 1293 $\pm$ 42      **Material:** Mollusc  
**Weight (mg):** 8.6      **Genus:** *Macoma*      **Species:** spp  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -7.20

**Contributor:** Kristjánsdóttir

**Sample Notes:** Small articulated shell

**Stratigraphy:** In Holocene mud.

**Significance:** Requested by Koc to improve the age model near the top of the core.

**Lab ID:** AA54590      **GRL-1679-S**      **Depth (cm):** 411-413  
**Age:** 2370 $\pm$ 55      **Corr. Age:** 1970 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 6.9      **Genus:** cf. *Macoma*      **Species:** *balthica*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -8.96

**Contributor:** Kristjánsdóttir

**Sample Notes:** Two thin valves, one is smaller than the other

**Stratigraphy:** Within a rhyolitic tephra peak.

**Lab ID:** AA38586      **GRL-1585-S**      **Depth (cm):** 455-457  
**Age:** 2578 $\pm$ 48      **Corr. Age:** 2178 $\pm$ 48      **Material:** Mollusc  
**Weight (mg):** 12.5      **Genus:** *Yoldia*      **Species:** cf. *myalis*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.79

**Contributor:** Kristjánsdóttir

**Sample Notes:** Paired, sent 1 valve

**Stratigraphy:** In Holocene mud.

**Lab ID:** AA54592      **GRL-1680-S**      **Depth (cm):** 620-622  
**Age:** 3375 $\pm$ 80      **Corr. Age:** 2975 $\pm$ 80      **Material:** Foraminifera  
**Weight (mg):** 2.2      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -1.74

**Contributor:** Kristjánsdóttir

**Sample Notes:** Mixed benthic foraminifera: 33 *Cassidulina neoteretis*, 41 *Islandiella norcrossi*, 16 *Melonis barleeanus*, 6 *Angulogerina fluensis*, 26 *N. labradoricum*, 3 *Cibicides lobatulus*, 1 *Dentalina* sp, 24 *Globobulimina*, 1 *Cassidulina reniforme*, 2 *Steinforthia concava*, 4 *Pullenia bulloides*

**Stratigraphy:** Within a rhyolitic tephra peak, most likely Hekla3.

**Lab ID:** -AA54591      **GRL-1681-S**      **Depth (cm):** 940-941  
**Age:** 4339 $\pm$ 62      **Material:** Mollusc  
**Weight (mg):** 25.4      **Genus:** cf. *Nucula*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.31

**Contributor:** Kristjánsdóttir

**Sample Notes:** Broken pieces of *Nucula*. Look nice and fresh, still with organic lining  
**Stratigraphy:** Within a rhyolitic tephra peak, most likely Hekla4

**Lab ID:** AA35175      **GRL-1542-S**      **Depth (cm):** 983  
**Age:** 4505 $\pm$ 50      **Corr. Age:** 4105 $\pm$ 50      **Material:** Mollusc  
**Weight (mg):** 14.5  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -6.83  
**Contributor:** Andrews  
**Sample Notes:** Unidentified gastropod  
**Stratigraphy:** In Holocene mud.

**Lab ID:** AA47786      **GRL-1656-S**      **Depth (cm):** 1171  
**Age:** 5296 $\pm$ 53      **Corr. Age:** 4896 $\pm$ 53      **Material:** Mollusc  
**Weight (mg):** 22      **Genus:** *Yoldia*      **Species:** *cf lenticula*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 0.20  
**Contributor:** Kristjánsdóttir  
**Sample Notes:** Sent one half of an articulated shell  
**Stratigraphy:** In Holocene mud.  
**Significance:** Requested by Koc to improve the age model.

**Lab ID:** AA38587      **GRL-1586-S**      **Depth (cm):** 1552-1553  
**Age:** 7749 $\pm$ 62      **Corr. Age:** 7349 $\pm$ 62      **Material:** Mollusc  
**Weight (mg):** 9.5      **Genus:** *Bathyarca*      **Species:** *glacialis*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.02  
**Sample Notes:** Sent 1 valve  
**Stratigraphy:** In Holocene mud.  
**Significance:** This date is the only date that deviates significantly from the linear age model of the core. A second date was submitted to verify the results.

**Lab ID:** AA51435      **GRL-1673-S**      **Depth (cm):** 1600-1602  
**Age:** 8084 $\pm$ 57      **Corr. Age:** 7684 $\pm$ 57      **Material:** Mollusc  
**Weight (mg):** 5.5      **Genus:** *Macoma*      **Species:** *balthica*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -8.20  
**Contributor:** Kristjánsdóttir  
**Significance:** The linear age model for this core might be offset around the 8.2 ka event. This date is submitted to clarify the possible offset.

**Lab ID:** AA35176      **GRL-1543-S**      **Depth (cm):** 2013-2014  
**Age:** 9265 $\pm$ 70      **Corr. Age:** 8865 $\pm$ 70      **Material:** Mollusc  
**Weight (mg):** 10  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -4.92  
**Contributor:** Andrews  
**Sample Notes:** Unidentified mollusk  
**Stratigraphy:** Closest date above the Saksunarvatn tephra.  
**Reference:** Andrews et al., 2002; Andersen et al., in prep.

**Lab ID:** AA54594      **GRL-1682-S**      **Depth (cm):** 2100-2102



**Age:** 9477±88

**Material:** Foraminifera

**Weight (mg):** 5.5

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -2.01

**Contributor:** Kristjánsdóttir

**Sample Notes:** Mixed benthic foraminifera: 180 *Cassidulina neoteretis*, 140 *Melonis barleeanus*, 90 *Islandiella norcrossi*, 48 *Globobulimina*, 39 *N. labradoricum*, 1 *Elphidium excavatum* f. *clavata*, 1 *Cibicides lobatulus*

**Stratigraphy:** Within the Saksunarvatn tephra peak. Base of tephra is at 2121 cm. This was the closest sample with well preserved foraminifera to date.

**Lab ID:** AA35805

**GRL-1561-S**

**Depth (cm):** 2530-2534

**Age:** 10920±85

**Corr. Age:** 10520±85

**Material:** Foraminifera

**Weight (mg):** 6.2

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -0.70

**Sample Notes:** 168 *Elphidium excavatum* f. *clavata*, 118 *Islandiella norcrossi*, 59 *Nonionellina labradorica*, 29 *Melonis barleeanus* (formerly *zaandamae*), 15 *Cassidulina reniforme*, 7 *C. neoteretis*, 10 *Cibicides lobatulus*, and 10 *Stainforthia concava*

**Stratigraphy:** Basal date.

**Core Summary:** This core is located in a critical area on the Iceland shelf where the warm Irminger Current and the cold East Iceland Current meet. Modern water temperature fluctuations over the site exceed 5° C.

**Reference:** Andrews et al., 2003a&b; Andrews et al., in press

**Core: MD99-2273**

**Location:** Central N Iceland shelf, Eyjafjardaráll

**Lat.:** 66°45.78'

**Long.:** -18°45.02'

**Depth (mwd):** 665

**Lab ID:** AA41841

**GRL-1605-S**

**Depth (cm):** 3944

**Age:** 6433±93

**Corr. Age:** 6033±93

**Material:** Mollusc

**Weight (mg):** 3.8

**Genus:** *Axinopsis*

**Species:**

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -2.40

**Contributor:** Andrews

**Stratigraphy:** Basal date.

**Significance:** Date indicates very fast rate of sediment accumulation which agrees with the results of Jonsdóttir (2001) on B997-316 from same area.

## NORWAY AND SPITZBERGEN

### Core: MD99-2296

**Location:** Andfjorden, Norway

**Lat.:** 69°8.3'

**Long.:** -16°19.5'

**Depth (mwd):** 508

**Lab ID:** AA36611

**GRL-1567-S**

**Depth (cm):** 748.5

**Age:** 10595±75

**Corr. Age:** 10195±75

**Material:** Mollusc

**Weight (mg):** 48.8

**Genus:** *Bathyarca*

**Species:** *glacialis*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 1.60

**Contributor:** Vorren

**Stratigraphy:** Found 48.5 cm below Holocene mud

**Lab ID:** AA36612

**GRL-1568-S**

**Depth (cm):** 1476

**Age:** 12485±80

**Corr. Age:** 12085±80

**Material:** Mollusc

**Weight (mg):** 78.5

**Genus:** *Bathyarca*

**Species:** *glacialis*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** 2.10

**Contributor:** Vorren

**Stratigraphy:** In glaciomarine sediments

### Core: MD99-2304

**Location:** West Spitsbergen margin

**Lat.:** 77°37.03'

**Long.:** 9°56.23'

**Depth (mwd):** 1360

**Lab ID:** AA36609

**GRL-1565-S**

**Depth (cm):** 80

**Age:** 9405±85

**Corr. Age:** 9005±85

**Material:** Mollusc

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -8.80

**Contributor:** Hald

**Lab ID:** AA33610

**GRL-1566-S**

**Depth (cm):** 186

**Age:** 12610±180

**Corr. Age:** 12210

**Material:** Mollusc

**Weight (mg):** 6.9

**Genus:** *Thyasira*

**Species:** *equalus*

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -7.30

**Contributor:** Hald

## SW ICELAND SHELF

### Core: B997-347 PC1

**Location:** SW Iceland shelf, west of HU93030-006, Jökuldjúp

**Lat.:** 63°55.7'

**Long.:** -24°28.9'

**Depth (mwd):** 371

**Lab ID:** AA32970

**GRL-1498-S**

**Depth (cm):** 2-4

**Age:** 770<sub>+65</sub>

**Corr. Age:** 370<sub>+65</sub>

**Material:** Foraminifera

**Weight (mg):** 3.5

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 0.00

**Sample Notes:** 41 *U. mediteranea*, 90 *P. bulloides*, 326 *A. angulosa*, 1 *Pyrgo*

**Stratigraphy:** Sample recovered from top of core in fine-grained stratified mud.

**Reference:** Smith, 2001

**Lab ID:** CURL5302

**GRL-1600-S**

**Depth (cm):** 60-62

**Age:** 3110<sub>+45</sub>

**Corr. Age:** 2710<sub>+45</sub>

**Material:** Foraminifera

**Weight (mg):** 6.6

**Genus:** *Uvoigerina*

**Species:** *mediteranea*

$\delta^{13}\text{C}$ : Assumed

$\delta^{13}\text{C}$ : 0.00

**Sample Notes:** 102 *U. mediteranea*

**Stratigraphy:** Sample taken from the sediment in the core catcher.

**Reference:** Smith, 2000; Andrews et al. 2000

**Lab ID:** AA32971

**GRL-1499-S**

**Depth (cm):** 100-102

**Age:** 5705<sub>+65</sub>

**Corr. Age:** 5305<sub>+65</sub>

**Material:** Foraminifera

**Weight (mg):** 8.9

**Genus:** *Uvoigerina*

**Species:** *mediteranea*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -0.10

**Sample Notes:** 150 *U. mediteranea*

**Stratigraphy:** Sample recovered from fine-grained stratified mud.

**Lab ID:** CURL5303

**GRL-1601-S**

**Depth (cm):** 190-192

**Age:** 9040<sub>+85</sub>

**Corr. Age:** 8640<sub>+85</sub>

**Material:** Foraminifera

**Weight (mg):** 5.2

$\delta^{13}\text{C}$ : Assumed

$\delta^{13}\text{C}$ : 0.00

**Sample Notes:** Benthic foraminifera: 35 *Uvoigerina mediteranea*, 23 *Globobulimina auriculata*, and 83 *Melonis barleeanus* (formerly *zaandamae*)

**Stratigraphy:** Sample taken from the sediment in the core catcher.

**Reference:** Smith, 2000

**Lab ID:** AA32972

**GRL-1500-S**

**Depth (cm):** 220-222

**Age:** 9695<sub>+95</sub>

**Corr. Age:** 9295<sub>+95</sub>

**Material:** Foraminifera

**Weight (mg):** 3.6

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -1.00

**Sample Notes:** Three species: 99 *Melonis barleeanus*, 12 *Uvoigerina mediteranea*, 16 *Globobulimina auriculata*

**Stratigraphy:** Sample recovered from fine-grained stratified mud.

**Reference:** Smith, 2000

**Lab ID:** AA32973

**GRL-1501-S**

**Depth (cm):** 340-342

**Age:** 10460<sub>+120</sub>

**Corr. Age:** 10060<sub>+120</sub>

**Material:** Foraminifera

**Weight (mg):** 3.3

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -1.00

**Sample Notes:** Mixed planktic and benthic: 257 *N. pachyderma* (s), 20 *N. labradorica*, 34 *M. barleeanus*, 6 *N. turgida*

**Stratigraphy:** Sample recovered from weakly stratified, bioturbated, fine-grained mud.

**Reference:** Smith, 2000

**Lab ID:** AA32974

**GRL-1502-S**

**Depth (cm):** 424-426

**Age:** 10950 $\pm$ 140

**Corr. Age:** 10550 $\pm$ 140

**Material:** Foraminifera

**Weight (mg):** 2.8

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -4.00

**Sample Notes:** 73 *C. reniforme*, 61 *N. labradorica*, 37 *E. exc. clavata*, 30 *I. norcrossi*, 17 *M. barleeanus*, 15 *S. concava*, 5 *C. lobatulus*, 2 *B. ten*, 1 *G. auricula*, 1 *Q. seminula*, 1 *Fissurina* sp.

**Stratigraphy:** Sample taken from weakly stratified, fine-grained mud with pebbles.

**Core Summary:** Core B997-347 recovered a high-resolution record of Holocene sediment.

(Smith, 2001) 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.

**Reference:** Smith and Licht, 2000; Smith 2001

**Core: HU93030-006 TWC**

**Location:** Southwestern Iceland Shelf

**Lat.:** 64°17.06'

**Long.:** -24°12.42'

**Depth (mwd):** 247

**Lab ID:** AA17390

**GRL-1169-S**

**Depth (cm):** 126

**Age:** 8480 $\pm$ 105

**Corr. Age:** 8080 $\pm$ 105

**Material:** Foraminifera

**Weight (mg):** 3.56

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma* (sinistral)

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -0.20

**Contributor:** Hagen

**Sample Notes:** 85 dextral, 205 sinistral, replacement for 1141-S (lost at Livermore lab).

**Core: JM96-1229/1GC**

**Location:** North Denmark Strait

**Lat.:** 67°1.03'

**Long.:** -25°9.02'

**Depth (mwd):** 1047

**Lab ID:** AA44507

**GRL-1650-S**

**Depth (cm):** 165-167

**Age:** >19,000

**Corr. Age:**

**Material:** Foraminifera

**Weight (mg):** 6.8

**Genus:** *Neogloboquadrina*

**Species:** *pachyderma* (sinistral)

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -5.47

**Contributor:** Andrews

**Sample Notes:** 800 picked

**Lab ID:** AA44508

**GRL-1651-S**

**Depth (cm):** 175-177

**Age:** 22170 $\pm$ 210

**Corr. Age:** 18170 $\pm$ 210

**Material:** Mollusc

**Weight (mg):** 17.4

**Genus:** *Nuculana*

**Species:** *pernula*

$\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : 1.22

**Contributor:** Andrews

**Lab ID:** AA44509      **GRL-1652-S**      **Depth (cm):** 189-191  
**Age:** 8173 $\pm$ 86      **Corr. Age:** 7773 $\pm$ 86      **Material:** Foraminifera  
**Weight (mg):** 5      **Genus:** *Neoglobobulimina*      **Species:** *pachyderma* (sinistral)  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -4.96

**Contributor:** Andrews

**Sample Notes:** 700 individuals

**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 MIS3 and 2, including the LGM. The upper 20 cm of sediment represents Holocene sedimentation.

**Reference:** Cartee-Schoolfield, 2001; Andrews and Cartee-Schoolfield, 2003.

**Core: MD99-2256**

**Location:** SW shelf, Jökuldjúp

**Lat.:** 64°18.19'

**Long.:** -24°12.4'

**Depth (mwd):** 246

**Lab ID:** C5729      **GRL-1607-S**      **Depth (cm):** 10-12  
**Age:** 775 $\pm$ 40      **Corr. Age:** 375 $\pm$ 40      **Material:** Mollusc  
**Weight (mg):** 56.7      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.90

**Contributor:** Kristjánsdóttir

**Sample Notes:** Scaphopod, a rather greyish looking fragment

**Stratigraphy:** Close to the core top. Intact bivalve from Holocene mud.

**Lab ID:** C5730      **GRL-1608-S**      **Depth (cm):** 400-402  
**Age:** 9710 $\pm$ 65      **Corr. Age:** 9310 $\pm$ 65      **Material:** Mollusc  
**Weight (mg):** 43.4      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.20

**Contributor:** Kristjánsdóttir

**Sample Notes:** Scaphopod, very nice, whole, white specimen

**Stratigraphy:** Intact bivalve in Holocene mud

**Lab ID:** C5731      **GRL-1609-S**      **Depth (cm):** 790-792  
**Age:** 10700 $\pm$ 55      **Corr. Age:** 10300 $\pm$ 55      **Material:** Mollusc  
**Weight (mg):** 91.8      **Genus:** Scaphopod      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.40

**Contributor:** Kristjánsdóttir

**Sample Notes:** A rough fragment, white with greyish stripes.

**Stratigraphy:** The boundary is a sand layer rich in tephra. Intact bivalve above a possible boundary.

**Lab ID:** AA35172      **GRL-1537-S**      **Depth (cm):** 1172-1175  
**Age:** 11880 $\pm$ 90      **Corr. Age:** 11440 $\pm$ 90      **Material:** Mollusc  
**Weight (mg):** 13.1      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -1.10

**Sample Notes:** Unidentified intact bivalve

**Reference:** Jennings et al, 2000

**Lab ID:** AA35803      **GRL-1559-S**      **Depth (cm):** 2260-2262  
**Age:** 13790 $\pm$ 80      **Corr. Age:** 13390 $\pm$ 80      **Material:** Mollusc  
**Weight (mg):** 15.6      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.10  
**Contributor:** Principato  
**Sample Notes:** Unidentified mollusc  
**Stratigraphy:** Just above the glacial diamicton.  
**Significance:** Provides a minimum date for the deglaciation of the Iceland shelf.

**Lab ID:** AA42028      **GRL-1606-S**      **Depth (cm):** 2320  
**Age:** >42000      **Corr. Age:**      **Material:** Mollusc  
**Weight (mg):** 345.5      **Genus:**      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.50  
**Contributor:** Principato  
**Sample Notes:** This shell was collected in the stiff diamicton unit present below a muddier, moister diamicton unit.  
**Significance:** Unidentified bivalve fragment near glacial marine till boundary. The age of this sample determines that this diamicton unit contains reworked shell material. This supports the interpretation that this lower diamicton unit is glacial till.  
**Core Summary:** Core MD99-2256 is located close to core 93030-006 LCF (Jennings at al., 2000). The difference between the two cores is that MD99-2256 penetrates into glacial diamicton but 93030-006 ends just above the diamicton. A date of 13790 $\pm$ 80 BP was obtained just above the diamicton in core MD99-2256, giving a minimum date for the deglaciation of the SW Iceland shelf. As a whole the core provides a record of the late glacial transition into the Holocene.

**Core: MD99-2259**

**Location:** SW shelf, Jökuldjúp  
**Lat.:** 63°57.79'      **Long.:** -24°28.98'      **Depth (mwd):** 385

**Lab ID:** NSRL11146      **GRL-1538-S**      **Depth (cm):** 178.5  
**Age:** 8990 $\pm$ 50      **Corr. Age:** 8590 $\pm$ 50      **Material:** Mollusc  
**Weight (mg):** 8.1  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -1.30  
**Sample Notes:** Unidentified mollusc  
**Stratigraphy:** Shell in Holocene mud.  
**Significance:** Indicates that this core has a relatively short Holocene section (as compared to other MD99 cores from the Iceland shelf).

**Lab ID:** AA35253      **GRL-1554-S**      **Depth (cm):** 2048-2050  
**Age:** 12790 $\pm$ 120      **Corr. Age:** 12390 $\pm$ 120      **Material:** Foraminifera  
**Weight (mg):** 6.2      **Genus:** *Nonionellina*      **Species:** *labradorica*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -3.66  
**Sample Notes:** 300 *N. labradorica*  
**Stratigraphy:** Basal date  
**Core Summary:** Core is composed of mainly glacial marine sediment with a basal date of 12790  $\pm$  120 BP.

**Core: MD99-2262**

**Location:** Látra Bank

**Lat.:** 65°26.65'

**Long.:** -26°18.94'

**Depth (mwd):** 140

**Lab ID:** NSRL11147 GRL-1540-S

**Depth (cm):** 144-148

**Age:** 10490±50

**Corr. Age:** 10090±50

**Material:** Mollusc

**Weight (mg):** 400.8 **Genus:** *Mya*

**Species:** *truncata*

**δ<sup>13</sup>C:** Measured **δ<sup>13</sup>C:** 1.90

**Significance:** Compare with data on JM96-1227

**Contributor:** Andrews

**Reference:** Smith and Licht, 2000.

**SW ICELAND SLOPE**

**Core: JM96-1221GC2**

**Location:** Iceland Slope, west of Látra moraine

**Lat.:** 65°7.9'      **Long.:** -27°32.2'      **Depth (mwd):** 483

**Lab ID:** AA44511      **GRL-**1654-S      **Depth (cm):** 28-30

**Age:** 14012<sub>+85</sub>      **Corr. Age:** 13612<sub>+85</sub>      **Material:** Mollusc

**Weight (mg):** 21.8      **Genus:** *Nuculana*      **Species:** *pernula*

**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -3.71

**Contributor:** Andrews

**Sample Notes:** one plus fragments

**Reference:** Andrews and Cartee-Schoolfield, 2003

**Core: JM96-1222/2**

**Location:** SW Iceland slope, South Denmark Strait, edge of Snorri Drift

**Lat.:** 65°25'      **Long.:** -28°25'      **Depth (mwd):** 1045

**Lab ID:** Tual1713      **Depth (cm):** 210-212

**Age:** 23585<sub>+180</sub>      **Corr. Age:** 23185<sub>+180</sub>      **Material:** Foraminifera

**Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)

**Contributor:** Hald

**Core: JM96-1225/2**

**Location:** SW Iceland slope, South Denmark Strait, edge of Snorri Drift

**Lat.:** 64°54.05'      **Long.:** -29°17.07'      **Depth (mwd):** 1683

**Lab ID:** Tual1712      **GRL-**      **Depth (cm):** 90-92

**Age:** 17925      **Corr. Age:**      **Material:** Foraminifera

**Weight (mg):**      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:**      **δ<sup>13</sup>C:**

**Contributor:** Hald

**Reference:** Hagen and Hall, 2002

**Lab ID:** Tual1715      **GRL-**      **Depth (cm):** 197-198

**Age:** 32660      **Corr. Age:**      **Material:** Foraminifera

**Weight (mg):**      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:**      **δ<sup>13</sup>C:**

**Contributor:** Hald

**Core: JM96-1225/2-GC**

**Location:** Southern Denmark Strait, Snorri Drift area, Vema site 206

**Lat.:** 64°54.04'      **Long.:** -29°17.067'      **Depth (mwd):** 1683

**Lab ID:** Tual1711      **GRL-**      **Depth (cm):** 353-355

**Age:** 49225      **Corr. Age:**      **Material:** Foraminifera

**Weight (mg):**      **Genus:** *Neogloboquadrina*      **Species:** *pachyderma* (sinistral)

**δ<sup>13</sup>C:**      **δ<sup>13</sup>C:**



**Contributor:** Hald

**Reference:** Andrews and Cartee-Schoolfield, 2003

**Core: MD99-2323**

**Location:** SW Iceland Slope, Snorri Drift

**Lat.:** 65°24.93'

**Long.:** -28°19.83'

**Depth (mwd):** 1062

**Lab ID:** AA44510

**GRL-1653-S**

**Depth (cm):** 0-3

**Age:** 6616±75

**Corr. Age:** 6216±75

**Material:** Foraminifera

**Weight (mg):** 6.8

**Genus:** *Globigerina*

**Species:** *bulloides*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 0.12

**Contributor:** Jennings

**Stratigraphy:** This is the date of the core top.

**Significance:** This is the age of cessation of sedimentation at this site.

**Lab ID:** AA35178

**GRL-1545-S**

**Depth (cm):** 1240-1244

**Age:** 47700±3000

**Corr. Age:** 47300±3000

**Material:** Mollusc

**Weight (mg):** 23.9

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 1.44

**Contributor:** Jennings

**Sample Notes:** Scaphopod

**Stratigraphy:** The lithology of this core varies widely with changes between silty clay, clayey silt and sandy mud with color variations between dark gray, dark grayish brown, olive gray and dark gray.

**Core Summary:** This 18 meter core was collected to study the origin of Snorri Drift off SW Iceland. The sediments record the interplay of glacially derived sediment from Iceland and Greenland and bottom currents.

**Reference:** Dunhill, 2000

**PART 2: TERRESTRIAL SAMPLES**  
**BAFFIN ISLAND**

**Core: CF1**

**Location:** Northern Baffin Island-Clyde Foreland, 74 m asl lake near hamlet of Clyde River.  
One lake east of the water supply lake  
**Lat.:** 70°29.414'      **Long.:** 69°37.163'

**Lab ID:** NSRL13214    **GRL-**      **Depth (cm):** 55  
**Age:** 9950±40      **Corr. Age:**      **Material:** Plant Macrofossils  
**Weight (mg):**      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -30.1  
**Contributor:** Briner  
**Sample Notes:** Basal organics in lake core.  
**Significance:** Provides age for onset of Holocene sedimentation in the lake basin.

**Core: CF3**

**Location:** Northern Baffin Island-Clyde Foreland, 27 m asl lake near Cape Christian  
**Lat.:** 70°31.951'      **Long.:** 68°22.047'

**Lab ID:** NSRL13216    **GRL-**      **Depth (cm):** 163  
**Age:** 9770±40      **Corr. Age:**      **Material:** Plant Macrofossils  
**Weight (mg):**      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -26  
**Contributor:** Briner  
**Sample Notes:** Basal organics in lake core.  
**Significance:** Provides age for onset of Holocene sedimentation in the lake basin.

**Core: CF4**

**Location:** Northern Baffin Island-Clyde Foreland, 19 m asl lake behind Clyde Cliffs  
**Lat.:** 70°42.652'      **Long.:** 69°2.829'

**Lab ID:** NSRL13218    **GRL-**      **Depth (cm):** 77  
**Age:** 9670±40      **Corr. Age:**      **Material:** Plant Macrofossils  
**Weight (mg):**      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -26.5  
**Contributor:** Briner  
**Sample Notes:** Basal organics in lake core.  
**Significance:** Provides age for onset of Holocene sedimentation in the lake basin.

**Core: CF6**

**Location:** Northern Baffin Island-Clyde Foreland, 45m asl lake near Kogalu River mouth  
**Lat.:** 70°41.516'      **Long.:** 69°5.78'

**Lab ID:** NSRL13215    **GRL-**      **Depth (cm):** 105  
**Age:** 10230±45      **Corr. Age:**      **Material:** Plant Macrofossils  
**Weight (mg):**      **Genus:**      **Species:**

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -25.1

**Contributor:** Briner

**Sample Notes:** Basal organics in lake core.

**Significance:** Provides age for onset of Holocene sedimentation in the lake basin.

**Core: CF11**

**Location:** Northern Baffin Island-Clyde Foreland, 105 m asl lake northwest of hamlet of Clyde River

**Lat.:** 70°28.758'      **Long.:** 69°40.15'

**Lab ID:** NSRL13217    **GRL-**

**Depth (cm):** 88

**Age:** 9600±45

**Corr. Age:**

**Material:** Plant Macrofossils

**Weight (mg):**

**Genus:**

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -30.4

**Contributor:** Briner

**Sample Notes:** Basal organics in lake core.

**Significance:** Provides age for onset of Holocene sedimentation in the lake basin.

**Sample: CG-00-1**

**Location:** Northern Baffin Island-Local glacier on Clyde Foreland. Sample was collected from the Little Ice Age moraine fronting the "Anomalous Glacier" on the Clyde Foreland, near the mouth of Ayr Lake

**Lat.:** 70°29.178'      **Long.:** 69°21.931'

**Lab ID:** NSRL12104    **GRL-**

**Depth (cm):**

**Age:** 3390±35

**Corr. Age:**

**Material:** Plant Macrofossils

**Weight (mg):** 1.87

**Genus:**

**Species:**

**Contributor:** Briner

**Significance:** Sample provides a maximum age for the glacier's Neoglacial advance. Age of onset of Neoglaciation similar to what Miller (1973) found on the Cumberland Peninsula. Reworked blocks of lake sediment that was incorporated into the glacier's Neoglacial (Little Ice Age) moraine.

**Reference:** Briner, 2003; Miller 1976

**Sample: CI01-3a**

**Location:** Northern Baffin Island-The head of Clyde Inlet, 62 m asl delta 3 km up-valley from river mouth at the head of Clyde Inlet

**Lat.:** 69°50'14"      **Long.:** 70°29'50"

**Lab ID:** AA45381    **GRL-**

**Depth (cm):**

**Age:** 7589±72

**Corr. Age:** 7037±72

**Material:** Mollusc

**Weight (mg):** 20.35

**Genus:** *Hyatella*

**Species:** *arctica*

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : 18.1

**Contributor:** Briner

**Significance:** Dates the age of the marine muds. Provides a minimum age for the delta. Similar, but slightly younger than, an age from a 67 m asl delta several km up-fiord. That

date is 7940 14C yr BP (I-1932). Cosmogenic exposure ages on delta surface average  $7.0 \pm 0.3$  ka, a significant offset from the calendar age of the surface, which is probably closer to 8 ka. Fossiliferous glacial-marine muds lapped onto raised delta forelope. Delta is an ice-contact feature, and dates to the time when ice was still at the head of Clyde Inlet.

**Reference:** Briner, 2003

**Sample: CI01-7b**

**Location:** Northern Baffin Island-Middle Clyde Inlet, 62 m asl delta 3 km up-valley from river mouth at the head of Clyde Inlet

**Lat.:** 69°59'49.2" **Long.:** 70°41'58.8"

**Lab ID:** AA45382 **GRL-** **Depth (cm):**  
**Age:** 8806±92 **Corr. Age:** 8456±92 **Material:** Mollusc  
**Weight (mg):** 18.55 **Genus:** *Mya* **Species:** *truncata*  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : 0.8

**Contributor:** Briner

**Sample Notes:** Dates the age of the delta. Fossiliferous foreset beds in raised marine delta. Unsure if this delta's elevation at 34 m asl is the local marine limit.

**Reference:** Briner, 2003

**Sample: CI01-8**

**Location:** Northern Baffin Island-Middle Clyde Inlet, Middle Clyde Inlet, in the "elbow valley

**Lat.:** 70°10'41.2" **Long.:** 69°55'0.3"

**Lab ID:** AA45383 **GRL-** **Depth (cm):**  
**Age:** 8937±80 **Corr. Age:** 8387±80 **Material:** Mollusc  
**Weight (mg):** 18.1 **Genus:** *Hyatella* **Species:** *arctica*  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : 0.3

**Contributor:** Briner

**Significance:** Provides an minimum age for deglaciation of the Elbow valley and the middle section of Clyde Inlet. Similar age to another sample collected from middle Clyde Inlet of 8806±92 yr BP. Glacial-marine muds are emerged in the "elbow valley." The muds are not directly tied to a marine limit, but the upper elevation of the muds occur ~50 m asl

**Reference:** Briner, 2003

**Sample: CI01-9c**

**Location:** Northern Baffin Island-Outer Clyde Inlet, Igloo Bay, outer Clyde Inlet

**Lat.:** 70°10'34.8" **Long.:** 69°59'53"

**Lab ID:** AA45380 **GRL-** **Depth (cm):**  
**Age:** 4102±73 **Corr. Age:** **Material:** Plant Macrofossils  
**Weight (mg):** 5.1 **Genus:** **Species:**  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -28.1

**Contributor:** Briner

**Sample Notes:** 3 individual pieces. Dates the age of the deltaic sediments and an 11 m rsl. Adds to local data used for outer Clyde Inlet emergence curve . Emerged deltaic sediments. **Reference:** Briner, 2003

**Sample: CI01-11**

**Location:** Northern Baffin Island-Outer Clyde Inlet

**Lat.:** 70°17'11.4" **Long.:** 69°10'7.7"

**Lab ID:** AA45384 **GRL-Depth (cm):**  
**Age:** 28510±390 **Corr. Age:** **Material:** Mollusc  
**Weight (mg):** 12.78 **Genus:** *Mya* **Species:** *truncata*  
**δ<sup>13</sup>C:** Measured **δ<sup>13</sup>C:** 1.1

**Contributor:** Briner

**Sample Notes:** Shells collected from moraine surface. Reworked into moraine; provides maximum age for moraine. Unsure that age is finite, possibly representing a little bit of contamination. So, a piece of the same sample was re-dated (NSRL-13213).

**Significance:** Age is significant because it potentially provides a maximum age for the regional LGM advance and is an indicator of ice-free conditions in Clyde Inlet.

Neighboring cosmogenic exposure ages are 12.0 ± 0.4 and 10.3 ± 0.4 ka.. Amino acid results: Glu: 0.096±0.028; Asp: 0.203±0.004

**Reference:** Briner, 2003

**Sample: CI01-11 dup**

**Location:** Northern Baffin Island-Outer Clyde Inlet

**Lat.:** 70°17'11.4" **Long.:** 69°10'7.7"

**Lab ID:** NSRL13213 **GRL-Depth (cm):**  
**Age:** 34120±170 **Corr. Age:** **Material:** Mollusc  
**Weight (mg):** 34.11 **Genus:** *Mya* **Species:** *truncata*  
**δ<sup>13</sup>C:** Measured **δ<sup>13</sup>C:** 1

**Contributor:** Briner

**Significance:** Shells collected from moraine surface. Reworked into moraine; provides maximum age for moraine. This sample is a re-date. Original date is 28,510 ± 390 yr BP (AA-45384). Still unclear if sample is finite or not. Neighboring cosmogenic exposure ages are 12.0 ± 0.4 and 10.3 ± 0.4 ka.

**Reference:** Briner, 2003

**Sample: CR1-00-1**

**Location:** Northern Baffin Island-Clyde River, exposure several hundred meters north of the eastern neighborhood of the hamlet of Clyde River

**Lat.:** 70°28.732' **Long.:** 69°34.696'

**Lab ID:** AA43172 **GRL-Depth (cm):**  
**Age:** 45800±2400 **Corr. Age:** **Material:** Mollusc  
**Weight (mg):** 32.6 **Genus:** *Astarte* **Species:** *borealus*  
**δ<sup>13</sup>C:** Measured **δ<sup>13</sup>C:** 2.12

**Contributor:** Briner

**Sample Notes:** Shell collected from foreset beds of at 17 m asl.

**Significance:** Dates relative sea level of 17 m asl. Numerous erratics in the region have LGM and deglacial-aged exposure ages that indicate that the site was covered by LGM ice. Thus, this site was overridden, but apparently survived the glacial episode. The delta has been modified by human activity. Stream cut into deposit revealed permafrost that was melting out at location of exposure.

**Reference:** Briner, 2003

**Sample: CR01-3**

**Location:** Northern Baffin Island-Clyde Foreland, along course of Clyde River north of the hamlet of Clyde River

**Lat.:** 70°30'17.1"      **Long.:** 68°37'41.4"

**Lab ID:** AA45387

**GRL-**

**Depth (cm):**

**Age:** 13280±180

**Corr. Age:**

**Material:** Plant Macrofossils

**Weight (mg):** 5.13

**Genus:**

**Species:**

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -18.1

**Contributor:** Briner

**Sample Notes:** Organic lense in fluvial sand deposit. Dates the age of the sand unit. There is no till between the collected strata and the surface. See duplicate sample, which has a radiocarbon-dead age.

**Significance:** The area was glaciated during the LGM

**Reference:** Briner, 2003

**Sample: CR01-3 (dup)**

**Location:** Northern Baffin Island-Clyde Foreland, along course of Clyde River north of the hamlet of Clyde River

**Lat.:** 70°30'17.1"      **Long.:** 68°37'41.4"

**Lab ID:** NSRL13212

**GRL-**

**Depth (cm):**

**Age:** >47800

**Corr. Age:**

**Material:** Plant Macrofossils

**Weight (mg):**

**Genus:**

**Species:**

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -0.01

**Contributor:** Briner

**Sample Notes:** picked out specifically aquatic moss fragments. Organic lense in fluvial sand deposit.

**Significance:** Dates the age of the sand unit. There is no till between the collected strata and the surface. See duplicate sample, which has an anomalously young age. The area was glaciated during the LGM

**Reference:** Briner, 2003

**Sample: CR01-6a**

**Location:** Northern Baffin Island-Clyde Foreland, along course of Clyde River north of the hamlet of Clyde River

**Lat.:** 70°30'58.1"      **Long.:** 68°39'13.3"

**Lab ID:** AA45385      **GRL-**      **Depth (cm):**  
**Age:** 39200±1200      **Corr. Age:**      **Material:** Mollusc  
**Weight (mg):** 14.5      **Genus:** *Macoma*      **Species:**  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -0.01

**Contributor:** Briner

**Significance:** Dates the age of the sand unit and an RSL at 55 m asl. There is no till between the collected strata and the surface, but the area was glaciated during the LGM. See sample 6b. Assume samples is radiocarbon-dead. Amino analyses: Glu: 0.078±0.012; Asp: 0.177±0.008.

**Reference:** Briner, 2003

**Sample: CR01-6b**

**Location:** Northern Baffin Island-Clyde Foreland, along course of Clyde River north of the hamlet of Clyde River

**Lat.:** 70°30'58.1"      **Long.:** 68°39'13.3"

**Lab ID:** AA45386      **GRL-**      **Depth (cm):**  
**Age:** 4279±78      **Corr. Age:**      **Material:** Shell  
**Weight (mg):** 3.43      **Genus:**      **Species:**

**Contributor:** Briner

**Sample Notes:** Shell periostracum piece collected from similar level as CR01-6a. Adjacent sample yielded a date that is considered to be radiocarbon-dead.

**Significance:** Dates the age of the sand unit and an RSL at 55 m asl

**Reference:** Briner, 2003

**Sample: CR01-6b**

**Location:** Northern Baffin Island-Clyde Foreland, 10 km up valley from Kogalu River mouth. Within one km of river

**Lat.:** 70°38'47.9"      **Long.:** 69°7'19.2"

**Lab ID:** AA45388      **GRL-**      **Depth (cm):**  
**Age:** >48400      **Corr. Age:**      **Material:** Mollusc  
**Weight (mg):** 15.6      **Genus:** *Hyatella*      **Species:** *arctica*  
 $\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.9

**Contributor:** Briner

**Sample Notes:** Dates the age of the sediments.

**Significance:** Sediments were overrun during the LGM. There is no till between the sediments and the surface. Maximum age for LGM advance. Small-scale reverse faulting (3-5 cm offsets) is the only sign of glacial overriding. Amino acid results: Glu: 0.067±0.019; Asp: 0.173±0.014

**Reference:** Briner, 2003

**Sample: CR2-00-1**

**Location:** Northern Baffin Island-Clyde Foreland, along the Clyde River, northwest of the hamlet of Clyde River

**Lat.:** 70°27.917'      **Long.:** 68°44.798'



**Lab ID:** NSRL12105 **GRL-** **Depth (cm):**  
**Age:** >45900 **Corr. Age:** **Material:** Plant Macrofossils  
**Weight (mg):** 9.6 **Genus:** **Species:**  
**Contributor:** Briner

**Sample Notes:** Layers of sand with interspersed organic material.

**Significance:** Dates the deposition of the fluvial sediments. Site is in area covered by LGM ice, but there is no till separating the sampled strata and the surface Fluvial sediments that were overrun by LGM ice.

**Reference:** Briner, 2003

**Sample: TM-00-1**

**Location:** Northern Baffin Island-The Maw Valley, outer Clyde Inlet, several km up the May Valley, north of outer Clyde Inlet

**Lat.:** 70°19.142' **Long.:** 69°17.957'

**Lab ID:** NSRL12103 **GRL-** **Depth (cm):**  
**Age:** 5910±55 **Corr. Age:** **Material:** Plant Macrofossils  
**Weight (mg):** 2 **Genus:** **Species:**  
**Contributor:** Briner

**Significance:** The sample was collected with the thought that it would date the age of the delta, and thus the lake. The age is too young to be the correct age of the lake. Cosmogenic exposure ages in the valley indicate that the lake should be between 10 and 12 ka. The sample may represent the onset of blowing sand in the middle holocene. Exposure of an ice-marginal lake delta. Delta formed in a lake that filled the valley when it was blocked by Clyde Inlet ice. Upper part of exposure revealed alternating peaty and sandy layers.

**Sample: TM-00-2**

**Location:** Northern Baffin Island-The Maw Valley, outer Clyde Inlet

**Lat.:** 70°17.044' **Long.:** 69°11.463'

**Lab ID:** AA43173 **GRL-** **Depth (cm):**  
**Age:** 4747±44 **Corr. Age:** **Material:** Plant Macrofossils  
**Weight (mg):** 11.07 **Genus:** **Species:**  
 $\delta^{13}\text{C}$ : Measured  $\delta^{13}\text{C}$ : -29.4

**Contributor:** Briner

**Sample Notes:** Peat layer in delta top-set beds

**Significance:** Age of associated relative sea level at 14 m asl Age was incorporated into an emergence curve for outer Clyde Inlet

**Reference:** Briner, 2003

## VESTFIRDIR, ICELAND

### Sample: AE-01-01

**Location:** Aedey, peat above basal sand and gravel unit

**Lat.:** 66°6.17'      **Long.:** -22°39.405'

**Lab ID:** AA44505      **GRL-1036-O**      **Depth (cm):** 70  
**Age:** 5017<sub>+50</sub>      **Corr. Age:**      **Material:** Peat  
**Weight (mg):** 26.8      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -28.70  
**Contributor:** Principato  
**Stratigraphy:** Peat interbedded between two sand and gravel units

### Sample: AR-01-04

**Location:** Ármúli, marine limit below Ármúli

**Lat.:** 66°3.31'      **Long.:** 22°27.69'

**Lab ID:** AA44323      **GRL-1648-S**      **Depth (cm):** surface  
**Age:** 1246<sub>+39</sub>      **Corr. Age:** 846<sub>+39</sub>      **Material:** Mollusc  
**Weight (mg):** 1075.4      **Genus:** *Astarte*      **Species:** *borealis*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 1.99  
**Contributor:** Principato  
**Stratigraphy:** Shell present on marine limit, beach terrace

### Sample: DN-02-01

**Location:** Dynjandi, outcrop of peat, ~75m asl.

**Lat.:** 66°13.44'      **Long.:** -22°36.354'

**Lab ID:** AA51433      **GRL-1041-O**      **Depth (cm):** 20  
**Age:** 2317<sub>+96</sub>      **Corr. Age:**      **Material:** Peat, plant macro fossils  
**Weight (mg):** 11      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -26.30  
**Contributor:** Principato  
**Significance:** The age is needed to confirm the identity of the tephra layer.  
**Stratigraphy:** This peat is below a rhyolitic tephra layer. This is probably a Hekla or Torfajökull volcanic layer.  
**Reference:** Principato, 2003

### Sample: DN-02-07

**Location:** Dynjandi, outcrop of peat, ~75m asl.

**Lat.:** 66°13.471'      **Long.:** -22°36.457'

**Lab ID:** AA51047      **GRL-1040-O**      **Depth (cm):** 210  
**Age:** 5108<sub>+93</sub>      **Corr. Age:**      **Material:** Peat  
**Weight (mg):** 19      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -29.90  
**Contributor:** Principato

**Sample Notes:** This outcrop of peat is located about 75m asl. The sample was sieved and wood fragments were picked. This layer of peat was more compact than previously collected peat samples

**Reference:** Principato, 2003

**Sample: FL-02-03**

**Location:** Leirufjörður, lowest raised beach

**Lat.:** 66°14.314'      **Long.:** -22°36.16'

**Lab ID:** AA51050      **GRL-1668-S**      **Depth (cm):** 30  
**Age:** 531±46      **Corr. Age:** 131±46      **Material:** Mollusc  
**Weight (mg):** 1360      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 3.20

**Contributor:** Principato

**Sample Notes:** Shell fragments difficult to identify. It is likely that this is a Little Ice Age beach. This is the lowest raised beach (30cm asl) formed in Leirufjörður. It has a very green, grassy surface. It cuts into the higher beach in the region.

**Reference:** Principato, 2003

**Sample: FX-02-03**

**Location:** Faxastadur, wood layer in peat section-- 10-20cm diameter wood

**Lat.:** 66°14.206'      **Long.:** -22°51.781'

**Lab ID:** AA51046      **GRL-30-W**      **Depth (cm):**  
**Age:** 4478±69      **Corr. Age:**      **Material:** Wood, Birch  
**Weight (mg):** 766      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Assumed      **δ<sup>13</sup>C:** -29.10

**Contributor:** Principato

**Sample Notes:** The wood was collected 50cm above the visible base of the peat section. More peat is present below the wood, but water table is at base of section.

**Reference:** Principato, 2003

**Sample: GR-02-01**

**Location:** Grunnavík, raised beach outcrop in Grunnavík cove

**Lat.:** 66°14.609'      **Long.:** -22°52.513'

**Lab ID:** AA51051      **GRL-1669-S**      **Depth (cm):**  
**Age:** 500±46      **Corr. Age:** 100±46      **Material:** Mollusc  
**Weight (mg):** 1235      **Genus:** *Astarte*      **Species:** *borealis*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 1.50

**Contributor:** Principato

**Sample Notes:** This shell was found in a raised beach near Grunnavík. The elevation of this beach is approximately 10m below the marine limit in this region.

**Significance:** This probably represents a period of higher sea level sometime in the Holocene. Since it is much lower than the marine limit, it is likely to be post-glacial. It is possible that this beach correlates with Naustavík.

**Reference:** Principato, 2003

**Sample: KA-01-10**

**Location:** Kaldalón, outcrop in small moraine on north side of Kaldalón

**Lat.:** 66°6.3'      **Long.:** -22°21.11'

<b>Lab ID:</b> AA44504	<b>GRL-1035-O</b>	<b>Depth (cm):</b>
<b>Age:</b> 2503±59	<b>Corr. Age:</b>	<b>Material:</b> Peat
<b>Weight (mg):</b> 15.7	<b>Genus:</b>	<b>Species:</b>
<b>δ<sup>13</sup>C:</b> Measured	<b>δ<sup>13</sup>C:</b> -24.80	

**Contributor:** Principato

**Sample Notes:** This sample is from peat at base of section accumulating above gravelly diamicton (till).

**Significance:** It provides a minimum age of the low, relief, subdued, grassy moraine in Kaldalón. It represents a Neoglacial advance of Drangajökull.

**Reference:** Principato, 2003

**Sample: KA-01-10**

**Location:** Kaldalón, peat section on north side of valley

**Lat.:** 66°6.3'      **Long.:** -22°21.11'

<b>Lab ID:</b> AA47787	<b>GRL-1038-O</b>	<b>Depth (cm):</b>
<b>Age:</b> 2420±49	<b>Corr. Age:</b>	<b>Material:</b> Peat
<b>Weight (mg):</b> 7.5	<b>Genus:</b>	<b>Species:</b>
<b>δ<sup>13</sup>C:</b> Measured	<b>δ<sup>13</sup>C:</b> -25.50	

**Contributor:** Principato

**Sample Notes:** This is a re-submission for another basal date on the thick peat section on the north side of Kaldalón.

**Reference:** Principato, 2003

**Sample: KA-01-11**

**Location:** Kaldalón, wood present in excellent section in stream cutbank in low relief, subdued moraine

**Lat.:** 66°6.3'      **Long.:** -22°21.11'

<b>Lab ID:</b> AA44325	<b>GRL-28-W</b>	<b>Depth (cm):</b>
<b>Age:</b> 3328±45	<b>Corr. Age:</b>	<b>Material:</b> Wood
<b>Weight (mg):</b> 2.5684	<b>Genus:</b>	<b>Species:</b>
<b>δ<sup>13</sup>C:</b> Measured	<b>δ<sup>13</sup>C:</b> -28.20	

**Contributor:** Principato

**Sample Notes:** birch?

**Significance:** This provides a minimum age to the subtle moraine in Kaldalón. It is likely that there was an early or mid-Holocene advance in Kaldalón.

**Reference:** Principato, 2003

**Sample: KA-01-22**

**Location:** Kaldalón, south side of valley

**Lat.:** 66°5.79'      **Long.:** -22°20.75'

**Lab ID:** AA47788      **GRL-29-W**

**Age:** 2623±68

**Weight (mg):** 28.9

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -27.70

**Contributor:** Principato

**Sample Notes:** This is from the base of the peat section on the subtle ridge on the south side of the valley. It is located just above the gravelly diamict. This section is much thinner than the section on the north side of the valley.

**Reference:** Principato, 2003

**Depth (cm):**

**Material:** Wood

**Sample: KA-01-24**

**Location:** Kaldalón, ridge on south side of valley

**Lat.:** 66°5.79'      **Long.:** -22°20.75'

**Lab ID:** AA47789      **GRL-1039-O**

**Age:** 1296±39

**Weight (mg):** 54.2

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : -30.00

**Contributor:** Principato

**Sample Notes:** This peat layer is just below a silicic tephra layer.

**Reference:** Principato, 2003

**Depth (cm):**

**Material:** Peat

**Species:**

**Sample: NA-02-01**

**Location:** Naustavík, shell in raised beach outcrop along eastern side of Ísafjardardjúp coast

**Lat.:** 66°8.303'      **Long.:** -22°46.36'

**Lab ID:**      **GRL-1670-S**

**Age:** 1780±57

**Weight (mg):** 1351.6      **Genus:** *Astarte*

$\delta^{13}\text{C}$ : Measured       $\delta^{13}\text{C}$ : 1.60

**Contributor:** Principato

**Sample Notes:** Problems dating this sample. This sample is located in a sandy soil forming on a raised beach. The beach is approximately 3m asl.

**Significance:** This beach represents a period of higher sea level around Vestfirðir, Iceland. It is possibly the same age as the raised beach on the north side of Kaldalón.

**Reference:** Principato, 2003

**Depth (cm):**

**Material:** Mollusc

**Species:** *borealis*

**Sample: NF-00-4**

**Location:** Nordurfjörður, cutbank of ditch, peat outcrop

**Lat.:** 66°3.381'      **Long.:** -21°34.823'

**Lab ID:** AA39772      **GRL-1031-O**

**Depth (cm):**

**Age:** 9081±68      **Corr. Age:**      **Material:** Peat  
**Weight (mg):** 10      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -27.40  
**Contributor:** Principato  
**Sample Notes:** Peat layer present below Saksunarvatn Ash  
**Reference:** Andrews et al., 2002; Principato, 2003

**Sample: NK-01-01**

**Location:** Lónseyri, raised beach near Lónseyri; north side of Kaldalón  
**Lat.:** 66°4.54'      **Long.:** -22°27.75'

**Lab ID:** AA44322      **GRL-1647-S**      **Depth (cm):**  
**Age:** 3612±40      **Corr. Age:** 3212±40      **Material:** Mollusc  
**Weight (mg):** 0.2845      **Genus:** *Astarte*      **Species:** *borealis*  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** 2.84  
**Contributor:** Principato  
**Sample Notes:** This shell is located 20cm below the surface in a raised beach (7m asl), which is lower than the marine limit  
**Significance:** This beach represents a Holocene transgression.  
**Reference:** Principato, 2003

**Sample: NS-02-02**

**Location:** Nes, diatomite outcrop along coastal bluffs  
**Lat.:** 66°14.543'      **Long.:** -22°54.22'

**Lab ID:** AA51434      **GRL-1042-O**      **Depth (cm):**  
**Age:** 7040±180      **Corr. Age:**      **Material:** Peat  
**Weight (mg):** 15      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -27.30  
**Contributor:** Principato  
**Sample Notes:** twig fragments  
**Stratigraphy:** The sample is from the diatomite that is stratigraphically below the basaltic tephra layer, which is probably Saksunarvatn Ash.  
**Significance:** The age of this sample should provide a maximum age for the overlying tephra layer.  
**Reference:** Principato, 2003

**Sample: RF-00-2**

**Location:** Reykjarfjardardalur, northwestern stream (cutbank) which empties into fjord; 50-100m asl  
**Lat.:** 65°58.483'      **Long.:** -21°39.159'

**Lab ID:** AA39773      **GRL-1032-O**      **Depth (cm):**  
**Age:** 5020±65      **Corr. Age:**      **Material:** Peat  
**Weight (mg):** 9.4      **Genus:**      **Species:**  
**δ<sup>13</sup>C:** Measured      **δ<sup>13</sup>C:** -25.90

**Contributor:** Principato

**Sample Notes:** Peat layer present below Saksunarvatn Ash, found in stream cutbank high in valley.

**Reference:** Andrews et al., 2002; Principato, 2003

**Sample: RF-00-2**

**Location:** Reykjarfjardardalur, northwestern stream (cutbank) which empties into fjord; 50-100m asl

**Lat.:** 65°58.483'      **Long.:** -21°39.159'

**Lab ID:** AA42027

**GRL-1034-O**

**Depth (cm):**

**Age:** 5155±66

**Corr. Age:**

**Material:** Peat

**Weight (mg):** 9.2

**Genus:**

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -24.20

**Contributor:** Principato

**Sample Notes:** This sample is interpreted as reworked tephra. It is present as a discontinuous peat layer in a stream cutbank. This sample is resubmitted to verify the age.

**Reference:** Andrews et al., 2002; Principato, 2003

**Sample: RF-00-4**

**Location:** Reykjarfjardardalur, northwestern stream (cutbank) which empties into fjord; 50-100m asl

**Lat.:** 65°58.483'      **Long.:** -21°39.159'

**Lab ID:** AA42026

**GRL-1033-O**

**Depth (cm):**

**Age:** 1337±81

**Corr. Age:**

**Material:** Peat

**Weight (mg):** 8.3

**Genus:**

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -24.50

**Contributor:** Principato

**Sample Notes:** This peat layer is approximately 30 cm above a basaltic tephra sample, which is probably Saksunarvatn.

**Reference:** Andrews et al., 2002; Principato, 2003

**Sample: SD-00-1**

**Location:** Selárdalur, buried wood layer present in irrigation ditch

**Lat.:** 65°47.93'      **Long.:** -21°47.229'

**Lab ID:** AA39771

**GRL-27-W**

**Depth (cm):**

**Age:** 1413±43

**Corr. Age:**

**Material:** Wood

**Weight (mg):** 19

**Genus:**

**Species:**

$\delta^{13}\text{C}$ : Measured

$\delta^{13}\text{C}$ : -28.10

**Contributor:** Principato

**Sample Notes:** Buried wood layer present in peat section in irrigation ditch

**Reference:** Principato, 2003

**Sample: UN-01-04**

**Location:** Unadsdalur, peat above thick sand and gravel unit near Unadsdalur

**Lat.:** 66°5.37'      **Long.:** -22°32.41'

**Lab ID:** AA44506

**GRL-1037-O**

**Depth (cm):**

**Age:** 3566±48

**Corr. Age:**

**Material:** Peat

**Weight (mg):** 12.1

**Genus:**

**Species:**

**δ<sup>13</sup>C:** Measured

**δ<sup>13</sup>C:** -25.80

**Contributor:** Principato

**Sample Notes:** Peat growing above sand and gravel unit, buried wood layer, surrounded by peat, present in irrigation ditch.

**Reference:** Principato, 2003



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**APPENDIX 1. RADIOCARBON DATES ARRANGED BY LABORATORY NUMBER**

<b>Lab. ID</b>	<b>GRL</b>	<b>Reported Age</b>	<b>Corr. Age</b>	<b>Core Name</b>	<b>General Location</b>
AA	1670-S	1,780 ± 57	1,380	NA-02-01	Vestfirðir, Iceland
AA16746	1144-S	1,610 ± 60	1,160	HU87033-017LCF	Labrador Shelf
AA16747	1145-S	8,000 ± 90	7,550	HU87033-017LCF	Labrador Shelf
AA16748	1146-S	9,110 ± 75	8,660	HU87033-017LCF	Labrador Shelf
AA16750	1148-S	10,155 ± 80	9,705	HU87033-017LCF	Labrador Shelf
AA16751	1149-S	8,705 ± 95	8,255	HU87033-018LCF	Labrador Shelf
AA17381	1158-S	*12,470 ± 190	12,020	IMP 76-2-1	Labrador Sea
AA17382	1159-S	*27,210 ± 500	26,760	IMP 76-2-1	Labrador Sea
AA17383	1160-S	*39,920 ± 1,850	39,470	IMP 76-2-1	Labrador Sea
AA17384	1161-S	*12,945 ± 110	12,495	HU77029-006	Baffin Bay
AA17385	1162-S	*12,830 ± 95	12,380	HU76029-025	Baffin Bay
AA17386	1163-S	>49,900 ±		HU76029-034PC	Baffin Bay
AA17387	1164-S	*13,170 ± 125	12,720	HU76029-040	Baffin Bay
AA17388	1165-S	11,830 ± 90	11,380	HU77029-017PC	Baffin Bay
AA17389	1167-S	15,760 ± 140	15,210	HU93030-007	East Greenland Slope
AA17390	1169-S	8,480 ± 105	8,080	HU93030-006 TWC	SW Iceland Shelf
AA17400	1180-S	10,860 ± 80	10,410	HU87033-015	Labrador Shelf
AA32954	1457-S	10,480 ± 85	9,930	JM96-1215/2-GC	East Greenland Shelf
AA32970	1498-S	770 ± 65	370	B997-347 PC1	SW Iceland Shelf
AA32971	1499-S	5,705 ± 65	5,305	B997-347 PC1	SW Iceland Shelf
AA32972	1500-S	9,695 ± 95	9,295	B997-347 PC1	SW Iceland Shelf
AA32973	1501-S	10,460 ± 120	10,060	B997-347 PC1	SW Iceland Shelf
AA32974	1502-S	10,950 ± 140	10,550	B997-347 PC1	SW Iceland Shelf
AA33610	1566-S	12,610 ± 180	12,210	MD99-2304	Spitsbergen
AA35170	1535-S	25,360 ± 240	24,910	HU97048-007PC	Labrador Sea
AA35171	1536-S	32,000 ± 600	31,550	HU97048-007PC	Labrador Sea
AA35172	1537-S	11,880 ± 90	11,440	MD99-2256	SW Iceland Shelf
AA35173	1539-S	30,230 ± 370	29,680	MD99-2260	East Greenland slope
AA35174	1541-S	8,840 ± 65	8,440	MD99-2266	NW Iceland Shelf
AA35175	1542-S	4,505 ± 50	4,105	MD99-2269	NW Iceland Shelf
AA35176	1543-S	9,265 ± 70	8,865	MD99-2269	NW Iceland Shelf
AA35177	1544-S	8,265 ± 65	7,715	MD99-2317	East Greenland Shelf
AA35178	1545-S	47,700 ± 3,000	47,300	MD99-2323	SW Iceland Slope
AA35179	1547-S	8,605 ± 65	8,205	B997-332PC	NW Iceland Shelf
AA35180	1548-S	9,480 ± 70	9,080	B997-332PC	NW Iceland Shelf
AA352154	1555-S	26,120 ± 340	25,570	MD99-2260	East Greenland slope
AA35253	1554-S	12,790 ± 120	12,390	MD99-2259	SW Iceland Shelf
AA35255	1556-S	9,800 ± 70	9,400	MD99-2266	NW Iceland Shelf
AA35803	1559-S	13,790 ± 80	13,390	MD99-2256	SW Iceland Shelf
AA35804	1560-S	780 ± 40	380	MD99-2266	NW Iceland Shelf
AA35805	1561-S	10,920 ± 85	10,520	MD99-2269	NW Iceland Shelf
AA36606	1562-S	>40,600 ±	>40,050	MD99-2317	East Greenland Shelf

**APPENDIX 1 Con't**

<b>Lab. ID</b>	<b>GRL</b>	<b>Reported Age</b>	<b>Corr. Age</b>	<b>Core Name</b>	<b>General Location</b>
AA36607	1563-S	2,810 ± 440	2,260	MD99-2320	East Greenland Shelf
AA36608	1564-S	11,125 ± 80	10,725	MD99-2322	East Greenland Shelf
AA36609	1565-S	9,405 ± 85	9,005	MD99-2304	Spitsbergen
AA36611	1567-S	10,595 ± 75	10,195	MD99-2296	Norwegian margin
AA36612	1568-S	12,485 ± 80	12,085	MD99-2296	Norwegian margin
AA37284	1575-S	10,403 ± 75	10,003	MD99-2236	Labrador Sea
AA37285	1578-S	10,572 ± 85	10,172	MD99-2236	Labrador Sea
AA38584	1583-S	72 ± 37		MD99-2269	NW Iceland Shelf
AA38585	1584-S	1,226 ± 25	826	MD99-2269	NW Iceland Shelf
AA38586	1585-S	2,578 ± 48	2,178	MD99-2269	NW Iceland Shelf
AA38587	1586-S	7,749 ± 62	7,349	MD99-2269	NW Iceland Shelf
AA39771	27-W	1,413 ± 43		SD-00-1	Vestfirðir, Iceland
AA39772	1031-O	9,081 ± 68		NF-00-4	Vestfirðir, Iceland
AA39773	1032-O	5,020 ± 65		RF-00-2	Vestfirðir, Iceland
AA40044	1596-S	8,609 ± 67	8,209	MD99-2322	East Greenland Shelf
AA40045	1587-S	9,311 ± 70	8,760	MD99-2317	East Greenland Shelf
AA40046	1588-S	9,283 ± 58	8,733	MD99-2317	East Greenland Shelf
AA40047	1589-S	9,729 ± 59	9,179	MD99-2317	East Greenland Shelf
AA40048	1590-S	10,000 ± 600	9,450	MD99-2317	East Greenland Shelf
AA40049	1591-S	10,745 ± 695	10,195	MD99-2317	East Greenland Shelf
AA40050	1592-S	693 ± 38	293	MD99-2322	East Greenland Shelf
AA40051	1593-S	4,899 ± 55	4,499	MD99-2322	East Greenland Shelf
AA40052	1594-S	6,115 ± 65	5,715	MD99-2322	East Greenland Shelf
AA40053	1595-S	8,000 ± 300	7,600	MD99-2322	East Greenland Shelf
AA40085	1597-S	13,835 ± 215	13,435	B997-326PC1	NW Iceland Shelf
AA41840	1604-S	8,732 ± 55	8,332	B997-330PC	NW Iceland Shelf
AA41841	1605-S	6,433 ± 93	6,033	MD99-2273	N central Iceland Shelf
AA42026	1033-O	1,337 ± 81		RF-00-4	Vestfirðir, Iceland
AA42027	1034-O	5,155 ± 66		RF-00-2	Vestfirðir, Iceland
AA42028	1606-S	>42000		MD99-2256	SW Iceland Shelf
AA42785	1615-S	11,567 ± 88	11,017	MD99-2317	East Greenland Shelf
AA43116	1616-S	11,950 ± 110	11,400	MD99-2317	East Greenland Shelf
AA43172		45,800 ± 2,400		CR1-00-1	Northern Baffin Island
AA43173		4,747 ± 44		TM-00-2	Northern Baffin Island
AA43349	1633-S	16,230 ± 150	15,680	MD99-2260	East Greenland slope
AA43350	1634-S	32,040 ± 850	31,490	MD99-2260	East Greenland slope
AA43351	1635-S	8,877 ± 62	8,477	MD99-2322	East Greenland Shelf
AA43352	1636-S	8,999 ± 61	8,599	MD99-2322	East Greenland Shelf
AA43353	1637-S	9,108 ± 65	8,708	MD99-2322	East Greenland Shelf
AA43354	1638-S	9,514 ± 81	9,114	MD99-2322	East Greenland Shelf
AA43355	1639-S	9,747 ± 76	9,347	MD99-2322	East Greenland Shelf
AA43356	1640-S	9,803 ± 64	9,403	MD99-2322	East Greenland Shelf
AA43357	1641-S	10,034 ± 69	9,634	MD99-2322	East Greenland Shelf
AA43358	1642-S	10,293 ± 77	9,893	MD99-2322	East Greenland Shelf

**APPENDIX 1 Con't**

<b>Lab. ID</b>	<b>GRL</b>	<b>Reported Age</b>	<b>Corr. Age</b>	<b>Core Name</b>	<b>General Location</b>
AA43359	1643-S	10,442 ± 82	10,042	MD99-2322	East Greenland Shelf
AA43360	1644-S	1,596 ± 43	1,046	MD99-2320	East Greenland Shelf
AA43584	1645-S	3,411 ± 53	2,861	BS88-06-05A	East Greenland Shelf
AA44321	1646-S	11,040 ± 170	10,640	B997-317PC	N central Iceland Shelf
AA44322	1647-S	3,612 ± 40	3,212	NK-01-01	Vestfiridir, Iceland
AA44323	1648-S	1,246 ± 39	846	AR-01-04	Vestfiridir, Iceland
AA44324	1649-S	1,281 ± 42		B997-311PC	NW Iceland Shelf
AA44325	28-W	3,328 ± 45		KA-01-11	Vestfiridir, Iceland
AA44504	1035-O	2,503 ± 59		KA-01-10	Vestfiridir, Iceland
AA44505	1036-O	5,017 ± 50		AE-01-01	Vestfiridir, Iceland
AA44506	1037-O	3,566 ± 48		UN-01-04	Vestfiridir, Iceland
AA44507	1650-S	>19,000		JM96-1229/1GC	NW Iceland Slope
AA44508	1651-S	22,170 ± 210	18,170	JM96-1229/1GC	NW Iceland Slope
AA44509	1652-S	8,173 ± 86	7,773	JM96-1229/1GC	NW Iceland Slope
AA44510	1653-S	6,616 ± 75	6,216	MD99-2323	SW Iceland Slope
AA44511	1654-S	14,012 ± 85	13,612	JM96-1221GC2	SW Iceland Slope
AA45380		4,102 ± 73		CI01-9c	Northern Baffin Island
AA45381		7,589 ± 72	7,037	CI01-3a	Northern Baffin Island
AA45382		8,806 ± 92	8,456	CI01-7b	Northern Baffin Island
AA45383		8,937 ± 80	8,387	CI01-8	Northern Baffin Island
AA45384		28,510 ± 390		CI01-11	Northern Baffin Island
AA45385		39,200 ± 1,200		CR01-6a	Northern Baffin Island
AA45386		4,279 ± 78		CR01-6b	Northern Baffin Island
AA45387		13,280 ± 180		CR01-3	Northern Baffin Island
AA45388		>48400		CR01-6b	Northern Baffin Island
AA47785	1655-S	1,693 ± 42	1,293	MD99-2269	NW Iceland Shelf
AA47786	1656-S	5,296 ± 53	4,896	MD99-2269	NW Iceland Shelf
AA47787	1038-O	2,420 ± 49		KA-01-10	Vestfiridir, Iceland
AA47788	29-W	2,623 ± 68		KA-01-22	Vestfiridir, Iceland
AA47789	1039-O	1,296 ± 39		KA-01-24	Vestfiridir, Iceland
AA49379	1657-S	3,490 ± 100	2,940	MD99-2317	East Greenland Shelf
AA49380	1658-S	1,267 ± 44	867	MD99-2322	East Greenland Shelf
AA49381	1659-S	1,627 ± 46	1,227	MD99-2322	East Greenland Shelf
AA49382	1660-S	3,451 ± 39	3,051	MD99-2322	East Greenland Shelf
AA50033	1661-S	2,503 ± 36	2,103	MD99-2266	NW Iceland Shelf
AA50034	1662-S	6,098 ± 50	5,698	MD99-2266	NW Iceland Shelf
AA50035	1663-S	7,826 ± 49	7,426	MD99-2266	NW Iceland Shelf
AA50036	1664-S	9,320 ± 190	8,920	MD99-2266	NW Iceland Shelf
AA50037	1665-S	9,804 ± 70	9,404	MD99-2266	NW Iceland Shelf
AA51046	30-W	4,478 ± 69		FX-02-03	Vestfiridir, Iceland
AA51047	1040-O	5,108 ± 93		DN-02-07	Vestfiridir, Iceland
AA51048	1666-S	1,006 ± 32	606	B997-341PC3	NW Iceland Shelf
AA51048	1666-S	2,980 ± 55	2,580	B997-341PC3	NW Iceland Shelf
AA51049	1667-S	1,453 ± 62	1,053	B997-341PC3	NW Iceland Shelf

**APPENDIX 1 Con't**

<b>Lab. ID</b>	<b>GRL</b>	<b>Reported Age</b>	<b>Corr. Age</b>	<b>Core Name</b>	<b>General Location</b>
AA51050	1668-S	531 ± 46	131	FL-02-03	Vestfirðir, Iceland
AA51051	1669-S	500 ± 46	100	GR-02-01	Vestfirðir, Iceland
AA51142	1671-S	2,235 ± 35	1,835	B997-341PC3	NW Iceland Shelf
AA51143	1672-S	2,657 ± 36	2,257	B997-341PC3	NW Iceland Shelf
AA51433	1041-O	2,317 ± 96		DN-02-01	Vestfirðir, Iceland
AA51434	1042-O	7,040 ± 180		NS-02-02	Vestfirðir, Iceland
AA51435	1673-S	8,084 ± 57	7,684	MD99-2269	NW Iceland Shelf
AA52349	1674-S	10,200 ± 1,200	9,800	B997-326 PC1	NW Iceland Shelf
AA53619	1675-S	1,151 ± 53	751	MD99-2266	NW Iceland Shelf
AA53620	1676-S	1,800 ± 45	1,400	MD99-2266	NW Iceland Shelf
AA54589	1677-S	1,088 ± 59		MD99-2269	NW Iceland Shelf
AA54590	1679-S	2,370 ± 55		MD99-2269	NW Iceland Shelf
AA54591	1681-S	4,339 ± 62		MD99-2269	NW Iceland Shelf
AA54592	1680-S	3,375 ± 80		MD99-2269	NW Iceland Shelf
AA54593	1678-S	1,535 ± 47		MD99-2269	NW Iceland Shelf
AA54594	1682-S	9,477 ± 88		MD99-2269	NW Iceland Shelf
AAR5247	1525-S	4,425 ± 65	4,025	B997-330PC	NW Iceland Shelf
AAR5248	1524-S	3,455 ± 105	3,055	B997-330PC	NW Iceland Shelf
AAR5249	1523-S	2,610 ± 40	2,210	B997-330PC	NW Iceland Shelf
AAR5250	1522-S	2,085 ± 40	1,685	B997-330PC	NW Iceland Shelf
AAR5251	1521-S	1,105 ± 40	705	B997-330PC	NW Iceland Shelf
AAR5503	1558-S	6,000 ± 55	5,600	B997-339PC2	NW Iceland Shelf
AAR5504	1557-S	4,530 ± 55	4,130	B997-339PC2	NW Iceland Shelf
C5729	1607-S	775 ± 40	375	MD99-2256	SW Iceland Shelf
C5730	1608-S	9,710 ± 65	9,310	MD99-2256	SW Iceland Shelf
C5731	1609-S	10,700 ± 55	10,300	MD99-2256	SW Iceland Shelf
C5732	1610-S	680 ± 30	280	MD99-2269	NW Iceland Shelf
C5733	1611-S	1,010 ± 30	610	MD99-2269	NW Iceland Shelf
C5734	1612-S	675 ± 30	275	MD99-2322	East Greenland Shelf
C5735	1613-S	5,130 ± 40	4,730	MD99-2266	NW Iceland Shelf
C5736	1614-S	6,570 ± 45	6,170	MD99-2266	NW Iceland Shelf
CAMS19389	1155-S	10,800 ± 50	10,350	HU77029-017PC	Baffin Bay
CURL5302	1600-S	3,110 ± 45	2,710	B997-347 PC1	SW Iceland Shelf
CURL5303	1601-S	9,040 ± 85	8,640	B997-347 PC1	SW Iceland Shelf
CURL5304	1602-S	3,580 ± 40	3,180	B997-324 PC1	NW Iceland Shelf
CURL5305	1603-S	9,510 ± 55	9,110	B997-324 PC1	NW Iceland Shelf
CURL5436	1599-S	8,810 ± 50	8,410	B997-329 PC	NW Iceland Shelf
CURL5439	1598-S	8,340 ± 95	7,940	B997-329 PC	NW Iceland Shelf
CURL5795	1617-S	1,880 ± 30	1,480	B997-329 PC	NW Iceland Shelf
CURL5797	1618-S	5,270 ± 35	4,870	B997-329 PC	NW Iceland Shelf
CURL5798	1619-S	7,100 ± 40	6,700	B997-329 PC	NW Iceland Shelf
CURL5836	1624-S	6,830 ± 45	6,430	B997-311PC	NW Iceland Shelf
CURL5837	1625-S	9,950 ± 55	9,550	B997-311PC	NW Iceland Shelf
CURL5838	1626-S	10,200 ± 55	9,800	B997-311PC	NW Iceland Shelf

**APPENDIX 1 Con't**

<b>Lab. ID</b>	<b>GRL</b>	<b>Reported Age</b>	<b>Corr. Age</b>	<b>Core Name</b>	<b>General Location</b>
CURL5891	1626-S	955 ± 35	555	B997-311GGC	NW Iceland Shelf
CURL5892	1628-S	610 ± 35	210	B997-341PC3	NW Iceland Shelf
CURL5893	1629-S	1,760 ± 35	1,360	B997-341PC3	NW Iceland Shelf
CURL5894	1630-S	9,510 ± 45	9,110	B997-315PC	NW Iceland Shelf
CURL5895	1631-S	10,850 ± 55	10,450	B997-315PC	NW Iceland Shelf
CURL5897	1627-S	5,700 ± 35	5,300	B997-311GGC	NW Iceland Shelf
NSR12569	1622-S	9,070 ± 45	8,670	B997-324 PC1	NW Iceland Shelf
NSRL11048	1551-S	1,140 ± 30	740	B997-327PC	NW Iceland Shelf
NSRL11049	1552-S	2,340 ± 80	1,940	B997-327PC	NW Iceland Shelf
NSRL11050	1553-S	835 ± 55	435	B997-327PC	NW Iceland Shelf
NSRL11146	1538-S	8,990 ± 50	8,590	MD99-2259	SW Iceland Shelf
NSRL11147	1540-S	10,490 ± 50	10,090	MD99-2262	SW Iceland Shelf
NSRL11148	1546-S	3,340 ± 35	2,940	B997-332PC	NW Iceland Shelf
NSRL11149	1549-S	9,920 ± 55	9,520	B997-332PC	NW Iceland Shelf
NSRL11150	1550-S	10,300 ± 60	9,900	B997-332PC	NW Iceland Shelf
NSRL11464	1569-S	4,080 ± 80	3,680	B997-331PC	NW Iceland Shelf
NSRL11554	1576-S	9,840 ± 70	9,480	B997-329 PC	NW Iceland Shelf
NSRL11555	1577-S	3,630 ± 35	3,230	B997-331PC	NW Iceland Shelf
NSRL11687	1579-S	modern		B997-329 PC	NW Iceland Shelf
NSRL11688	1580-S	9,400 ± 55	9,000	B997-329 PC	NW Iceland Shelf
NSRL11689	1581-S	600 ± 55	200	B997-332PC	NW Iceland Shelf
NSRL11690	1582-S	8,900 ± 60	8,500	B997-332PC	NW Iceland Shelf
NSRL12103		5,910 ± 55		TM-00-1	Northern Baffin Island
NSRL12104		3,390 ± 35		CG-00-1	Northern Baffin Island
NSRL12105		>45900		CR2-00-1	Northern Baffin Island
NSRL12567	1620-S	1,800 ± 30	1,400	B997-324 PC1	NW Iceland Shelf
NSRL12568	1621-S	7,200 ± 40	6,800	B997-324 PC1	NW Iceland Shelf
NSRL13212		>47800		CR01-3 (dup)	Northern Baffin Island
NSRL13213		34,120 ± 170		CI01-11 dup	Northern Baffin Island
NSRL13214		9,950 ± 40		CF1-55cm	Northern Baffin Island
NSRL13215		10,230 ± 45		CF6-105cm	Northern Baffin Island
NSRL13216		9,770 ± 40		CF3-163cm	Northern Baffin Island
NSRL13217		9,600 ± 45		CF11-88cm	Northern Baffin Island
NSRL13218		9,670 ± 40		CF4-77cm	Northern Baffin Island
Tual1711			49,225	JM96-1225/2-GC	SW Iceland Slope
Tual1712			17,925	JM96-1225/2	SW Iceland Slope
Tual1713		23,585 ± 180	23,185	JM96-1222/2	SW Iceland Slope
Tual1714			11,365	JM96-1216	East Greenland Shelf
Tual1715			32,660	JM96-1225/2	SW Iceland Slope



**APPENDIX 2. RADIOCARBON DATES ARRANGED BY REGION**

<b>GRL</b>	<b>Lab. ID</b>	<b>Core Name</b>	<b>Depth in core (cm)</b>	<b>Rep. Age</b>	<b>±</b>	<b>SD</b>
<b>Baffin Bay</b>						
1162-S	AA17385	HU76029-025	73.5	*12,830	±	95
1163-S	AA17386	HU76029-034PC	300	>49,900	±	
1164-S	AA17387	HU76029-040	75	*13,170	±	125
1161-S	AA17384	HU77029-006	25.5	*12,945	±	110
1165-S	AA17388	HU77029-017PC	127	11,830	±	90
1155-S	CAMS19389	HU77029-017PC	52-55	10,800	±	50
<b>East Greenland Shelf</b>						
1544-S	AA35177	MD99-2317	695	8,265	±	65
1562-S	AA36606	MD99-2317	2496-2498	>40,600	±	
1587-S	AA40045	MD99-2317	909.5	9,311	±	70
1590-S	AA40048	MD99-2317	1128	10,000	±	600
1591-S	AA40049	MD99-2317	1479	10,745	±	695
1657-S	AA49379	MD99-2317	310-314	3,490	±	100
1615-S	AA42785	MD99-2317	1850-1852	11,567	±	88
1616-S	AA43116	MD99-2317	1980-1982	11,950	±	110
1588-S	AA40046	MD99-2317	941	9,283	±	58
1589-S	AA40047	MD99-2317	1078-1080	9,729	±	59
1644-S	AA43360	MD99-2320	1330-1336	1,596	±	43
1563-S	AA36607	MD99-2320	1586	2,810	±	440
1612-S	C5734	MD99-2322	2.3	675	±	30
1592-S	AA40050	MD99-2322	32-36	693	±	38
1658-S	AA49380	MD99-2322	100-103	1,267	±	44
1659-S	AA49381	MD99-2322	150	1,627	±	46
1660-S	AA49382	MD99-2322	368	3,451	±	39
1593-S	AA40051	MD99-2322	564	4,899	±	55
1594-S	AA40052	MD99-2322	771	6,115	±	65
1595-S	AA40053	MD99-2322	1073	8,000	±	300
1596-S	AA40044	MD99-2322	1298	8,609	±	67
1635-S	AA43351	MD99-2322	1393	8,877	±	62
1636-S	AA43352	MD99-2322	1432	8,999	±	61
1637-S	AA43353	MD99-2322	1516	9,108	±	65
1638-S	AA43354	MD99-2322	1807	9,514	±	81
1639-S	AA43355	MD99-2322	1908	9,747	±	76
1640-S	AA43356	MD99-2322	2006	9,803	±	64
1641-S	AA43357	MD99-2322	2140	10,034	±	69
1642-S	AA43358	MD99-2322	2342	10,293	±	77
1643-S	AA43359	MD99-2322	2436	10,442	±	82
1564-S	AA36608	MD99-2322	2636	11,125	±	80
1645-S	AA43584	BS88-06-05A	16-18	3,411	±	53
1457-S	AA32954	JM96-1215/2-GC	354-356	10,480	±	85
	Tual1714	JM96-1216	240-241	80	±	80

**APPENDIX 2 Con't**

<b>GRL</b>	<b>Lab. ID</b>	<b>Core Name</b>	<b>Depth in core (cm)</b>	<b>Rep. Age</b>	<b>±</b>	<b>SD</b>
<b>East Greenland slope</b>						
1539-S	AA35173	MD99-2260	893	30,230	±	370
1633-S	AA43349	MD99-2260	10-12	16,230	±	150
1634-S	AA43350	MD99-2260	1155-1156	32,040	±	850
1555-S	AA352154	MD99-2260	667	26,120	±	340
1167-S	AA17389	HU93030-007	45	15,760	±	140
<b>Iceland, Vestfirðir</b>						
1036-O	AA44505	AE-01-01	70	5,017	±	50
1648-S	AA44323	AR-01-04	surface	1,246	±	39
1035-O	AA44504	KA-01-10	306	2,503	±	59
28-W	AA44325	KA-01-11	265	3,328	±	45
1647-S	AA44322	NK-01-01	20	3,612	±	40
27-W	AA39771	SD-00-1	150	1,413	±	43
1037-O	AA44506	UN-01-04	200	3,566	±	48
1041-O	AA51433	DN-02-01	20	2,317	±	96
1040-O	AA51047	DN-02-07	210	5,108	±	93
1668-S	AA51050	FL-02-03	30	531	±	46
30-W	AA51046	FX-02-03	150	4,478	±	69
1669-S	AA51051	GR-02-01	400	500	±	46
1038-O	AA47787	KA-01-10	306	2,420	±	49
29-W	AA47788	KA-01-22	60	2,623	±	68
1039-O	AA47789	KA-01-24	30	1,296	±	39
1670-S		NA-02-01	20	1,780	±	57
1031-O	AA39772	NF-00-4	60	9,081	±	68
1042-O	AA51434	NS-02-02	15	7,040	±	180
1032-O	AA39773	RF-00-2	50	5,020	±	65
1034-O	AA42027	RF-00-2	50	5,155	±	66
1033-O	AA42026	RF-00-4	50	1,337	±	81
<b>Labrador Sea</b>						
1535-S	AA35170	HU97048-007PC	572-576	25,360	±	240
1536-S	AA35171	HU97048-007PC	680-684	32,000	±	600
1158-S	AA17381	IMP 76-2-1	105	*12,470	±	190
1159-S	AA17382	IMP 76-2-1	417.5	*27,210	±	500
1160-S	AA17383	IMP 76-2-1	796.5	*39,920	±	1,850
1575-S	AA37284	MD99-2236	1727-1731	10,403	±	75
1578-S	AA37285	MD99-2236	1707-1711	10,572	±	85
1180-S	AA17400	HU87033-015	480-509	10,860	±	80
1144-S	AA16746	HU87033-017LCF	66-70	1,610	±	60
1145-S	AA16747	HU87033-017LCF	396-400	8,000	±	90
1146-S	AA16748	HU87033-017LCF	743-747	9,110	±	75
1148-S	AA16750	HU87033-017LCF	1228-1232	10,155	±	80
1149-S	AA16751	HU87033-018LCF	696-700	8,705	±	95

**APPENDIX 2 Con't**

<b>GRL</b>	<b>Lab. ID</b>	<b>Core Name</b>	<b>Depth in core (cm)</b>	<b>Rep. Age ± SD</b>
<b>N central Iceland Shelf</b>				
1605-S	AA41841	MD99-2273	3944	6,433 ± 93
1646-S	AA44321	B997-317PC	178.75-181.25	11,040 ± 170
<b>Northern Baffin Island</b>				
	NSRL12103	TM-00-1		5,910 ± 55
	AA43173	TM-00-2		4,747 ± 44
	NSRL12104	CG-00-1		3,390 ± 35
	AA43172	CR1-00-1		45,800 ± 2,400
	NSRL12105	CR2-00-1		>45900 ±
	AA45387	CR01-3		13,280 ± 180
	NSRL13212	CR01-3 (dup)		>47800 ±
	AA45385	CR01-6a		39,200 ± 1,200
	AA45386	CR01-6b		4,279 ± 78
	AA45388	CR01-6b		>48400 ±
	AA45381	CI01-3a		7,589 ± 72
	AA45382	CI01-7b		8,806 ± 92
	AA45383	CI01-8		8,937 ± 80
	AA45380	CI01-9c		4,102 ± 73
	AA45384	CI01-11		28,510 ± 390
	NSRL13213	CI01-11 dup		34,120 ± 170
	NSRL13218	CF4-77cm	77	9,670 ± 40
	NSRL13217	CF11-88cm	88	9,600 ± 45
	NSRL13216	CF3-163cm	163	9,770 ± 40
	NSRL13215	CF6-105cm	105	10,230 ± 45
	NSRL13214	CF1-55cm	55	9,950 ± 40
<b>Norwegian margin</b>				
1567-S	AA36611	MD99-2296	748.5	10,595 ± 75
1568-S	AA36612	MD99-2296	1476	12,485 ± 80
<b>NW Iceland Shelf</b>				
1541-S	AA35174	MD99-2266	2762	8,840 ± 65
1556-S	AA35255	MD99-2266	3761-3763	9,800 ± 70
1560-S	AA35804	MD99-2266	0-3	780 ± 40
1661-S	AA50033	MD99-2266	258.5-259.5	2,503 ± 36
1662-S	AA50034	MD99-2266	1062-1064	6,098 ± 50
1663-S	AA50035	MD99-2266	1867-1869	7,826 ± 49
1664-S	AA50036	MD99-2266	3128-3130	9,320 ± 190
1665-S	AA50037	MD99-2266	3794.5-3796.5	9,804 ± 70
1676-S	AA53620	MD99-2266	162.5-163.5	1,800 ± 45
1675-S	AA53619	MD99-2266	72-74	1,151 ± 53
1613-S	C5735	MD99-2266	689	5,130 ± 40
1614-S	C5736	MD99-2266	1267	6,570 ± 45
1542-S	AA35175	MD99-2269	983	4,505 ± 50
1543-S	AA35176	MD99-2269	2013-2014	9,265 ± 70

**APPENDIX 2 Con't**

<b>GRL</b>	<b>Lab. ID</b>	<b>Core Name</b>	<b>Depth in core (cm)</b>	<b>Rep. Age <math>\pm</math> SD</b>
1561-S	AA35805	MD99-2269	2530-2534	10,920 $\pm$ 85
1583-S	AA38584	MD99-2269	0-2	72 $\pm$ 37
1584-S	AA38585	MD99-2269	177-178	1,226 $\pm$ 25
1585-S	AA38586	MD99-2269	455-457	2,578 $\pm$ 48
1586-S	AA38587	MD99-2269	1552-1553	7,749 $\pm$ 62
1655-S	AA47785	MD99-2269	265-267	1,693 $\pm$ 42
1656-S	AA47786	MD99-2269	1171	5,296 $\pm$ 53
1673-S	AA51435	MD99-2269	1600-1602	8,084 $\pm$ 57
1677-S	AA54589	MD99-2269	160-162	1,088 $\pm$ 59
1678-S	AA54593	MD99-2269	245-247	1,535 $\pm$ 47
1679-S	AA54590	MD99-2269	411-413	2,370 $\pm$ 55
1680-S	AA54592	MD99-2269	620-622	3,375 $\pm$ 80
1681-S	AA54591	MD99-2269	940-941	4,339 $\pm$ 62
1682-S	AA54594	MD99-2269	2100-2102	9,477 $\pm$ 88
1610-S	C5732	MD99-2269	42-43	680 $\pm$ 30
1611-S	C5733	MD99-2269	130-132	1,010 $\pm$ 30
1626-S	CURL5891	B997-311GGC	27	955 $\pm$ 35
1627-S	CURL5897	B997-311GGC	138	5,700 $\pm$ 35
1649-S	AA44324	B997-311PC	22	1,281 $\pm$ 42
1624-S	CURL5836	B997-311PC	65	6,830 $\pm$ 45
1625-S	CURL5837	B997-311PC	108	9,950 $\pm$ 55
1626-S	CURL5838	B997-311PC	265	10,200 $\pm$ 55
1630-S	CURL5894	B997-315PC	60	9,510 $\pm$ 45
1631-S	CURL5895	B997-315PC	250	10,850 $\pm$ 55
1602-S	CURL5304	B997-324 PC1	74-76	3,580 $\pm$ 40
1603-S	CURL5305	B997-324 PC1	140-142	9,510 $\pm$ 55
1622-S	NSR12569	B997-324 PC1	130-132	9,070 $\pm$ 45
1620-S	NSRL12567	B997-324 PC1	30-32	1,800 $\pm$ 30
1621-S	NSRL12568	B997-324 PC1	120-122	7,200 $\pm$ 40
1674-S	AA52349	B997-326 PC1	206-210	10,200 $\pm$ 1,200
1597-S	AA40085	B997-326PC1	180-184	13,835 $\pm$ 215
1551-S	NSRL11048	B997-327PC	70-72	1,140 $\pm$ 30
1552-S	NSRL11049	B997-327PC	170-172	2,340 $\pm$ 80
1553-S	NSRL11050	B997-327PC	20-22	835 $\pm$ 55
1617-S	CURL5795	B997-329 PC	10-12	1,880 $\pm$ 30
1619-S	CURL5798	B997-329 PC	50-52	7,100 $\pm$ 40
1576-S	NSRL11554	B997-329 PC	400-402	9,840 $\pm$ 70
1579-S	NSRL11687	B997-329 PC	0-2	modern
1580-S	NSRL11688	B997-329 PC	180-182	9,400 $\pm$ 55
1618-S	CURL5797	B997-329 PC	24-26	5,270 $\pm$ 35
1599-S	CURL5436	B997-329 PC	84-86	8,810 $\pm$ 50
1598-S	CURL5439	B997-329 PC	74-76	8,340 $\pm$ 95
1604-S	AA41840	B997-330PC	465	8,732 $\pm$ 55

**APPENDIX 2 Con't**

<b>GRL</b>	<b>Lab. ID</b>	<b>Core Name</b>	<b>Depth in core (cm)</b>	<b>Rep. Age <math>\pm</math> SD</b>
1525-S	AAR5247	B997-330PC	301	4,425 $\pm$ 65
1524-S	AAR5248	B997-330PC	230	3,455 $\pm$ 105
1523-S	AAR5249	B997-330PC	143	2,610 $\pm$ 40
1522-S	AAR5250	B997-330PC	110	2,085 $\pm$ 40
1521-S	AAR5251	B997-330PC	35	1,105 $\pm$ 40
1577-S	NSRL11555	B997-331PC	134-136	3,630 $\pm$ 35
1569-S	NSRL11464	B997-331PC	190-192	4,080 $\pm$ 80
1547-S	AA35179	B997-332PC	155	8,605 $\pm$ 65
1548-S	AA35180	B997-332PC	242	9,480 $\pm$ 70
1546-S	NSRL11148	B997-332PC	23	3,340 $\pm$ 35
1549-S	NSRL11149	B997-332PC	355	9,920 $\pm$ 55
1550-S	NSRL11150	B997-332PC	519	10,300 $\pm$ 60
1581-S	NSRL11689	B997-332PC	0-2	600 $\pm$ 55
1582-S	NSRL11690	B997-332PC	144-146	8,900 $\pm$ 60
1558-S	AAR5503	B997-339PC2	80-81.5	6,000 $\pm$ 55
1557-S	AAR5504	B997-339PC2	40-41.5	4,530 $\pm$ 55
1666-S	AA51048	B997-341PC3	32.5	1,006 $\pm$ 32
1667-S	AA51049	B997-341PC3	58.5	1,453 $\pm$ 62
1671-S	AA51142	B997-341PC3	125.5	2,235 $\pm$ 35
1672-S	AA51143	B997-341PC3	172.5	2,657 $\pm$ 36
1666-S	AA51048	B997-341PC3	220	2,980 $\pm$ 55
1628-S	CURL5892	B997-341PC3	7	610 $\pm$ 35
1629-S	CURL5893	B997-341PC3	92	1,760 $\pm$ 35
1650-S	AA44507	JM96-1229/1GC	165-167	>19,000 $\pm$
1651-S	AA44508	JM96-1229/1GC	175-177	22,170 $\pm$ 210
1652-S	AA44509	JM96-1229/1GC	189-191	8,173 $\pm$ 86
<b>Spitzbergen</b>				
1566-S	AA33610	MD99-2304	186	12,610 $\pm$ 180
1565-S	AA36609	MD99-2304	80	9,405 $\pm$ 85
<b>SW Iceland Shelf</b>				
1169-S	AA17390	HU93030-006 TWC	126	8,480 $\pm$ 105
1498-S	AA32970	B997-347 PC1	2-4	770 $\pm$ 65
1499-S	AA32971	B997-347 PC1	100-102	5,705 $\pm$ 65
1500-S	AA32972	B997-347 PC1	220-222	9,695 $\pm$ 95
1501-S	AA32973	B997-347 PC1	340-342	10,460 $\pm$ 120
1502-S	AA32974	B997-347 PC1	424-426	10,950 $\pm$ 140
1600-S	CURL5302	B997-347 PC1	60-62	3,110 $\pm$ 45
1601-S	CURL5303	B997-347 PC1	190-192	9,040 $\pm$ 85
1537-S	AA35172	MD99-2256	1172-1175	11,880 $\pm$ 90
1559-S	AA35803	MD99-2256	2260-2262	13,790 $\pm$ 80
1606-S	AA42028	MD99-2256	2320	>42000 $\pm$
1607-S	C5729	MD99-2256	10-12	775 $\pm$ 40
1608-S	C5730	MD99-2256	400-402	9,710 $\pm$ 65
1609-S	C5731	MD99-2256	790-792	10,700 $\pm$ 55

**APPENDIX 2 Con't**

<b>GRL</b>	<b>Lab. ID</b>	<b>Core Name</b>	<b>Depth in core (cm)</b>	<b>Rep. Age <math>\pm</math> SD</b>
1554-S	AA35253	MD99-2259	2048-2050	12,790 $\pm$ 120
1538-S	NSRL11146	MD99-2259	178.5	8,990 $\pm$ 50
1540-S	NSRL11147	MD99-2262	144-148	10,490 $\pm$ 50
<b>SW Iceland Slope</b>				
1654-S	AA44511	JM96-1221GC2	28-30	14,012 $\pm$ 85
	Tual1713	JM96-1222/2	210-212	23,585 $\pm$ 180
1545-S	AA35178	MD99-2323	1240-1244	47,700 $\pm$ 3,000
1653-S	AA44510	MD99-2323	0-3	6,616 $\pm$ 75

**APPENDIX 3. RADIOCARBON DATES ARRANGED BY AGE**

<b>Reported Age</b>	<b>Lab. ID</b>	<b>Reported Age</b>	<b>Lab. ID</b>
modern	NSRL11687	2,370 ± 55	AA54590
72 ± 37	AA38584	2,420 ± 49	AA47787
80 ± 80	Tual1714	2,503 ± 59	AA44504
500 ± 46	AA51051	2,503 ± 36	AA50033
531 ± 46	AA51050	2,578 ± 48	AA38586
600 ± 55	NSRL11689	2,610 ± 40	AAR5249
610 ± 35	CURL5892	2,623 ± 68	AA47788
675 ± 30	C5734	2,657 ± 36	AA51143
680 ± 30	C5732	2,810 ± 440	AA36607
693 ± 38	AA40050	2,980 ± 55	AA51048
770 ± 65	AA32970	3,110 ± 45	CURL5302
775 ± 40	C5729	3,328 ± 45	AA44325
780 ± 40	AA35804	3,340 ± 35	NSRL11148
835 ± 55	NSRL11050	3,375 ± 80	AA54592
955 ± 35	CURL5891	3,390 ± 35	NSRL12104
1,006 ± 32	AA51048	3,411 ± 53	AA43584
1,010 ± 30	C5733	3,451 ± 39	AA49382
1,088 ± 59	AA54589	3,455 ± 105	AAR5248
1,105 ± 40	AAR5251	3,490 ± 100	AA49379
1,140 ± 30	NSRL11048	3,566 ± 48	AA44506
1,151 ± 53	AA53619	3,580 ± 40	CURL5304
1,226 ± 25	AA38585	3,612 ± 40	AA44322
1,246 ± 39	AA44323	3,630 ± 35	NSRL11555
1,267 ± 44	AA49380	4,080 ± 80	NSRL11464
1,281 ± 42	AA44324	4,102 ± 73	AA45380
1,296 ± 39	AA47789	4,279 ± 78	AA45386
1,337 ± 81	AA42026	4,339 ± 62	AA54591
1,413 ± 43	AA39771	4,425 ± 65	AAR5247
1,453 ± 62	AA51049	4,478 ± 69	AA51046
1,535 ± 47	AA54593	4,505 ± 50	AA35175
1,596 ± 43	AA43360	4,530 ± 55	AAR5504
1,610 ± 60	AA16746	4,747 ± 44	AA43173
1,627 ± 46	AA49381	4,899 ± 55	AA40051
1,693 ± 42	AA47785	5,017 ± 50	AA44505
1,760 ± 35	CURL5893	5,020 ± 65	AA39773
1,800 ± 45	AA53620	5,108 ± 93	AA51047
1,800 ± 30	NSRL12567	5,130 ± 40	C5735
1,880 ± 30	CURL5795	5,155 ± 66	AA42027
2,085 ± 40	AAR5250	5,270 ± 35	CURL5797
2,235 ± 35	AA51142	5,296 ± 53	AA47786
2,317 ± 96	AA51433	5,700 ± 35	CURL5897
2,340 ± 80	NSRL11049	5,705 ± 65	AA32971

**APPENDIX 3 Con't**

<b>Reported Age</b>	<b>Lab. ID</b>	<b>Reported Age</b>	<b>Lab. ID</b>
5,910 ± 55	NSRL12103	9,400 ± 55	NSRL11688
6,000 ± 55	AAR5503	9,405 ± 85	AA36609
6,098 ± 50	AA50034	9,477 ± 88	AA54594
6,115 ± 65	AA40052	9,480 ± 70	AA35180
6,433 ± 93	AA41841	9,510 ± 55	CURL5305
6,570 ± 45	C5736	9,510 ± 45	CURL5894
6,616 ± 75	AA44510	9,514 ± 81	AA43354
6,830 ± 45	CURL5836	9,600 ± 45	NSRL13217
7,040 ± 180	AA51434	9,670 ± 40	NSRL13218
7,100 ± 40	CURL5798	9,695 ± 95	AA32972
7,200 ± 40	NSRL12568	9,710 ± 65	C5730
7,589 ± 72	AA45381	9,729 ± 59	AA40047
7,749 ± 62	AA38587	9,747 ± 76	AA43355
7,826 ± 49	AA50035	9,770 ± 40	NSRL13216
8,000 ± 90	AA16747	9,800 ± 70	AA35255
8,000 ± 300	AA40053	9,803 ± 64	AA43356
8,084 ± 57	AA51435	9,804 ± 70	AA50037
8,173 ± 86	AA44509	9,840 ± 70	NSRL11554
8,265 ± 65	AA35177	9,920 ± 55	NSRL11149
8,340 ± 95	CURL5439	9,950 ± 55	CURL5837
8,480 ± 105	AA17390	9,950 ± 40	NSRL13214
8,605 ± 65	AA35179	10,000 ± 600	AA40048
8,609 ± 67	AA40044	10,034 ± 69	AA43357
8,705 ± 95	AA16751	10,155 ± 80	AA16750
8,732 ± 55	AA41840	10,200 ± 1,200	AA52349
8,806 ± 92	AA45382	10,200 ± 55	CURL5838
8,810 ± 50	CURL5436	10,230 ± 45	NSRL13215
8,840 ± 65	AA35174	10,293 ± 77	AA43358
8,877 ± 62	AA43351	10,300 ± 60	NSRL11150
8,900 ± 60	NSRL11690	10,403 ± 75	AA37284
8,937 ± 80	AA45383	10,442 ± 82	AA43359
8,990 ± 50	NSRL11146	10,460 ± 120	AA32973
8,999 ± 61	AA43352	10,480 ± 85	AA32954
9,040 ± 85	CURL5303	10,490 ± 50	NSRL11147
9,070 ± 45	NSR12569	10,572 ± 85	AA37285
9,081 ± 68	AA39772	10,595 ± 75	AA36611
9,108 ± 65	AA43353	10,700 ± 55	C5731
9,110 ± 75	AA16748	10,745 ± 695	AA40049
9,265 ± 70	AA35176	10,800 ± 50	CAMS19389
9,283 ± 58	AA40046	10,850 ± 55	CURL5895
9,311 ± 70	AA40045	10,860 ± 80	AA17400
9,320 ± 190	AA50036	10,920 ± 85	AA35805



**APPENDIX 3 Con't**

<b>Reported Age</b>	<b>Lab. ID</b>	<b>Reported Age</b>	<b>Lab. ID</b>
10,950 ± 140	AA32974	22,170 ± 210	AA44508
11,040 ± 170	AA44321	23,585 ± 180	Tual1713
11,125 ± 80	AA36608	25,360 ± 240	AA35170
11,567 ± 88	AA42785	26,120 ± 340	AA352154
11,830 ± 90	AA17388	27,210 ± 500	AA17382
11,880 ± 90	AA35172	28,510 ± 390	AA45384
11,950 ± 110	AA43116	30,230 ± 370	AA35173
12,470 ± 190	AA17381	32,000 ± 600	AA35171
12,485 ± 80	AA36612	32,040 ± 850	AA43350
12,610 ± 180	AA33610	34,120 ± 170	NSRL13213
12,790 ± 120	AA35253	39,200 ± 1,200	AA45385
12,830 ± 95	AA17385	39,920 ± 1,850	AA17383
12,945 ± 110	AA17384	45,800 ± 2,400	AA43172
13,170 ± 125	AA17387	47,700 ± 3,000	AA35178
13,280 ± 180	AA45387	>19,000 ±	AA44507
13,790 ± 80	AA35803	>40,600 ±	AA36606
13,835 ± 215	AA40085	>42000 ±	AA42028
14,012 ± 85	AA44511	>45900 ±	NSRL12105
15,760 ± 140	AA17389	>47800 ±	NSRL13212
16,230 ± 150	AA43349	>48400 ±	AA45388
		>49,900 ±	AA17386

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