The sedimentary facies as well as the subbottom profiling seem to fit the concept of contour currents shaping the continental slope. These bottom currents are channelized within the channels. Due to coriolis force, micro-laminated mud is accumulated on the western channel flank (=sedimentary ridge) as a levee deposit with high sedimentation rates. Turbidity currents disrupt the contour currents in unequal intervals and lead to cross stratified spill-over turbidites on the ridges. These processes of an active fan growth east of Crary Fan are concentrated on glacial times, as indicated by ^{14}C-AMS-dating, whereas in interglacial times, the fan is sediment-starved and prevailed by bioturbated mud.

SEDIMENTS OF THE ICELAND FAROE RIDGE: OVERFLOW CIRCULATION CONTROLING BEDFORM PATTERNS

F. Werner (Geologisch-Paläontologisches Institut, Kiel, Germany), W. Dorn, and D. Milkert

The overflow circulation entering the North Atlantic via Iceland Faroe ridge and the Faroe Channels give rise to a multitude of sorting effects and bedform formation which raises the following background questions: 1) how "good" is the coincidence between the oceanographically and sedimentologically determined qualities of flow direction and power? 2) Should it be possible to infer bed load transport rates from comparison of temporally differing, sonographically surveyed bedform patterns? 3) Does a main sediment stream exist on the southern slope and, if so, which is its exact geographic position?

A slope-parallel channel system on the southern slope of the ridge with overflow current-controlled, asymmetrical sediment fillings permits study of the development of the overflow currents by means of sediment cores taken from opposite channel flanks. Due to Coriolis forces, the northern flanks show condensed sedimentation and slightly increased grain sizes contrasting with the relationships on the opposite flanks.

The age-dating of the cores shows that the modern overflow system was re-established since Termination Ia. Associate problems dealt with are the question of maximum water depth of iceberg plough marks, a possibly biologic origin of huge blocks apparently related to water mass boundaries, and the composition of contourites as manifested in the bedforms.

PRELIMINARY MASS-AGE DISTRIBUTION OF SEDIMENT DRIFTS NORTH OF THE CHARLIE-GIBBS FRACTURE ZONE

C.N. Wold (GEOMAR, Kiel, Germany), W.W. Hay, W.-C. Dullo, T. Wolf, and P. Bruns

We have compiled the masses of sediment in the major sediment drifts that lie between the Charlie-Gibbs Fracture Zone and Greenland-Scotland Ridge. The region was divided into a 1 x 1° latitude-longitude grid, and an average stratigraphic-lithologic section was compiled for each grid cell. The stratigraphy and lithology of each grid cell was derived from reports of the Deep Sea Drilling Project (DSDP) and Ocean Drilling Project (ODP), from single-channel seismic profiles distributed by the U. S. National Marine Geophysical Data Center (Boulder, Colorado), and from literature sources.

To calculate sediment mass-age distributions, several calculations were made for each grid cell. The bulk density of a sediment layer in a grid cell was calculated by multiplying the grain density times the depth-dependant solidity of the layer. The average solidity (100% - porosity) of each sediment layer was integrated over the thickness of the layer using empirical equations for the porosity vs. depth relationships of different sediment lithologies.