



The deglaciation history of the mid-Norwegian continental shelf

Haflidi Haflidason (1), Eivind Bøyum (1,2), and Berit Oline Hjelstuen (1)

(1) University of Bergen, Dept. Earth Science, Bergen, Norway (haflidi.haflidason@geo.uib.no, +47 55583660), (2) Schlumberger Information Solutions, Stavanger, Norway (eivind.boyum@gmail.com)

The present knowledge on the last deglaciation of the mid-Norwegian continental shelf is still largely based on works from the late 1970's to early 1980's and improved by re-dating shell rich events using the AMS technology in the late 1990's. These new dating results offered a new chronological framework for the two youngest till units identified in the outer shelf setting of the Mid-Norwegian shelf area using a regional grid of sparker lines. These till units were found to have been deposited around 15000 and 13500 14C BP. The results showed that the Mid-Norwegian shelf ice partly reached the shelf edge as late as ca. 13000 14C BP. Dating from the nearest coastal area show that most of the shelf area had been deglaciated in less than 1000 years.

New high-resolution seismic technology, applying the TOPAS parametric echosounder system, the multibeam and the Olex data bathymetric data combined with new AMS dated gravity cores have in the recent year made it possible to approach the deglaciation history in a more detailed way than previously available. The results show that the last glacial maximum ice sheet retreated from the outer shelf area around 15200 14C. The ice sheet readvanced around 14500 14C and created a large end moraine complex and a new minor readvance is interpreted to have occurred around 13700 14C BP before a rapid retreat to the coastal areas during the Bølling period. The two dated ice sheet readvances have occurred within the period of the cold regional climatic event Heinrich 1.