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**Characterization of Deep-Water Turbidite Sub-Environments from the Shelf-Edge to Basin Floor,  
Storvola, Spitsbergen**

A locality has been chosen on the island of Spitsbergen in the Arctic archipelago of Svalbard in which an entire system of clinofolds, from outer shelf to basin floor, is exposed in continuous, seismic-scale outcrop. From this system of clinofolds, one with an obvious lowstand complex (which, according to the lowstand turbidite theory should contain the largest volume of turbidites) has been selected. This locality is particularly useful for a characterization of particular parts of a turbidite system because, in order for a study like this one to be meaningful, location within the system must be a known variable

Within the studied lowstand complex, detailed stratigraphic sections have been measured from each of four turbidite sub-environments: 1) upper-slope canyon/gully fill, 2) upper/middle-slope late prograding wedge, 3) lower-slope channel-levee complex, and 4) basin floor fan. Turbidite bed-type frequencies from these data sets will be analyzed in order to determine which bed types (and at what frequencies) characterize each sub-environment. Special attention will be paid to evidence which demonstrates generation mechanisms of individual turbidite beds in hopes of differentiating between surge-type turbidites (generated by slump failure) and those triggered by sustained hyperpycnal flow.