



## **Plate tectonic modelling and retro-deformation of passive margins: The Norwegian-Greenland Sea**

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We have revisited the evolution of the NE Atlantic domain since the Jurassic by integrating a wealth of data (regional gravity, magnetic, bathymetric and seismic reflection) into a quantitative plate reconstruction. The integrated plate model utilises revised interpretations of the continent-ocean transition, structural observations from new 2-D seismic data covering the Jan Mayen microcontinent and the Møre and Vøring Basins, and regional structural and geological observations from the conjugate Norwegian and Greenland margins. Classical models treat Greenland and Eurasia as rigid plates with plate boundaries that changed little since the breakup. This study represents a first attempt to retro-deform plate boundaries constrained by structural and geometric observations. The model was created utilising a semi-rigid plate model to create a set of palaeogeographic reconstructions back to a pre-Jurassic rift 175 Ma configuration.