

# **The passive margins: Quantitative Parameters of Evolution**

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The geodynamic evolution of the passive margins are clearly reflected in changes of quantitative parameters of large complexes: the Late Jurassic - Early Cretaceous ; the Upper Cretaceous - Eocene; the Oligocene - Neogene; the Pleistocene - Holocene. These complexes are attributed for the main stages of structural reorganization for the last 160 million years of geological history. The calculation of quantitative parameters (volume of sediments, rate of sedimentation) was made on the base of the Atlas maps at a scale 1:25 000 000 which published early in 1993 year.

The Upper Jurassic - Lower Cretaceous complex contains the great volume, 54,8 million m<sup>3</sup> and have considerable variation in sedimentary rates 0,02-5,02 cm/1000 years in different segments of the passive margins. The volume of the Upper Cretaceous - Eocene complex is slightly decreased to 44, 51 million km<sup>3</sup>. The rate of sedimentation decreased up to 2,26-3,47 cm/1000 years. The distribution of parameters is related to ascending movements of the continents against a background of large horizontal displacements under the influence of spreading in the oceans.

The all parameters of the Oligocene - Neogene complex are greatly increased as compared with the Upper Cretaceous - Eocene complex. The rate of sedimentation (10,2 to 30,0 cm/1000 years) reach their extreme values in the Bengal and the North-Western Atlantic basins.

The volume of the Pleistocene - Holocene complex is rather small but the rate of sedimentation changes significantly between different sectors of passive margins. The minimum values (0,6-2,5 cm/1000 years) are similar to those in the underlying complex and maximum values (106-156 cm/1000 years) are 10-15 times higher.