THE GENESIS OF ARCTIC OIL/GAS-BEARING BASINS

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The North Polar Ocean is a giant superbasin, including 15 or more sedimentary basins, 7 of which have commercial resources of oil and gas. Destruction of platforms and fluidodynamic events are the leading processes for oil and gas genesis. The natural heterogeneity of the Mantle and Lithosphere and intercalation of compaction and undercompaction zones determine solution and liquids upward motion . The break- through of fluids is the reason of deformation and thermosubstance transfer. The strong uprising flows simulate the hydrocarbons generation in sedimentary basins during intense subsidence. Large highs containing significant resources of hydrocarbons are located above the most deep areas of basins. The conditions of oil/gas - bearing formation in the Euroasian and Amerasian sectors of the Arctic are different. The Norvegian - Barents plate in Euroasian sector was undergone the intense subsidence and abundant sediment accumulation took place at the End of the Permian and in the Triassic as a consequence of the riftogenesis. This very rapid subsidence was the reason of fluidodynamic processes manifestation and the appearing of favourable structures for gas accumulation in the central parts and oil – at the periphery of the basins. The destruction of platform blocks happened very rapidly in the other half of the Arctic and it was the reason of labigenesis and deep-water ocean depressions formation, some of which have continental or subcontinental Crust. The labigenesis processes play a significant role in fluidodynamic activity recently. The Mesozoic-Cenozoic tectogenesis, including riftogenesis, determines the geodynamic and oil generation in the lower parts of basinssequences and predominantly gas-bearing in upper part.