

Caspian Region: Petroleum Systems and Potential Resources.

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The Caspian region is characterized by development of three main oil-gas bearing basins with unique potential hydrocarbon resources. Formation of these basins occurred at different stages of geodynamic evolution accompanied by a change of extension to compression: the South Caspian basin was formed in latest Mesozoic-Cenozoic; the Middle Caspian basin - in the early Mesozoic-Cenozoic; the North Caspian basin, presented only its southern part, - in the Paleozoic-Mesozoic.

Analysis of distribution of potential hydrocarbon resources is carried out separately for seven oil-gas-bearing systems: Pliocene-Quaternary; Oligocene-Miocene; Upper Cretaceous-Eocene; Upper Jurassic-Early Cretaceous; Permian-Triassic; Carboniferous; Devonian.

According to geodynamic evolution all systems unevenly distributed over the area of the Caspian region. For each system, along with traditional indications of resources concentration, parameters of thermal regime and a rate of sedimentation are also used. A combination of all of these parameters and a density of proved hydrocarbon resources at standard areas provides grounds for conclusion about intensity of process of oil and gas generation and accumulation in time and space, potential hydrocarbon resources in each of the system. Two Cenozoic systems contain 45-55%, three Mesozoic systems - 35-45%, two Paleozoic systems - 10-15% of initial potential resources. About 35% of all resources occur at a depth up to 6 km and are available for development of fields. The remaining 65% will be an object of exploration works in the Third Millennium.