

## **Paleozoic carbonate platforms and reefs of the Pre-Caspian depression - structure and development**

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Pre-Caspian basin is one of the deepest depression on the Earth. The giant oil and gas fields are discovered here. In most cases they are connected with Paleozoic carbonate sediments. Two types of carbonate platforms - rimmed shelves and isolated platforms -, and two types of reefs - barrier reefs on the edges of shelves and intrabasinal reefs - are established. Western and Northern carbonate shelves have Upper Devonian - Tournaisian, Middle Visean - Bashkirian, and Middle Moscovian - Artinskian age with total thickness to 3000 m. Eastern and South-Eastern shelves have Middle Visean - Bashkirian and Upper Moscovian - Upper Carboniferous, sometimes Asselian age with thickness 500 - 700 m of each other. Hiatuses of carbonate sedimentation are stipulated by deposition of terrigenous strata, and full stopping to the Kungurian salt. The time of development of reefs which rim shelves is analogous. Both progradation and retrogradation of reefs of different ages are established. Isolated carbonate platforms have thickness about 2000 - 2500 m and are related to basement uplifts. Intrabasinal reefs have thickness 2500 - 3500 m and are located at the top of older marginal reef systems. Both isolated platforms and intrabasinal reefs are drowned since they ceased to evolve by the late Bashkirian in connection with anoxic event in the Pre-Caspian micro-ocean.