

Main Characteristics of Structure of Ancient Platforms

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Platforms are the independent isolated units of Earth's continental crust. A sediment cover of the platforms rejects the history of geological development of the planet. A sediment cover of the Archean-Proterozoic platforms carries the greatest information. The cover structure of the ancient platforms is constant and depends on the interaction between a craton and an ocean. This sediment cover consists of three deposit complexes (craton sediment strata):

- marine deposits of a basal complex,
- marine deposits of a carbonate complex,
- continental deposits of a terrigene complex.

The constancy of cover structure allows to compare the individual platforms and to group them with space and time.

If the basal complexes of some platforms have the same age, they most likely represented a single continent in that time. By these means the analysis of structure of a craton sedimentary cover can help in recognizing the reconstructions of supercontinents.

Furthermore, each craton stratum (structural-formation complexes) is an oil-bearing system characterized by specific fluid dynamics, developing the definite types of traps and conditions for forming hydrocarbon pools. The comparative analysis of petroleum potential of single-type strata in different cratons allows to determine the most general principles of hydrocarbon pool occurrence.