

Anchimetamorphism: Where is the boundary between diagenesis and metamorphism

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One of the problems of petrology, which refers to the separation of diagenesis from “true” metamorphism, is discussed. The existing scientific information on this very complex issue, which has been published by various scientists around the world at different times, is analyzed and generalized. The mineral indicators established for the stage - "anchymetamorphism – metamorphism", including new diagnostic criteria for the beginning of metamorphism, which more accurately determine the degree of rock transformation at the border of diagenesis and metamorphism, have been introduced. The results of the research of mineral indicators are analyzed, which refer to: the appearance and transformation of minerals, the presence of unstable mineral parageneses at the anchimetamorphic stage, and the establishment of a complete equilibrium state between all phases by the beginning of the metamorphic stage. The rapid progress of research in this direction over the past three decades has changed previously existing views on the boundary between diagenesis and metamorphism, which has led to the need to verify the level of metamorphism of a number of formations. The paper presents a discussion of one such "re-evaluation" on the example of weakly metamorphosed metasandstones of the Khrami crystalline massif.