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MINERALOGY OF CLAYS ON PERMO-TRIASSIC BOUNDARY TRANSITION IN KARAVANKE MOUNTAINS (BRSNINA SECTION)

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The end Permian mass extinction at approximately 250 Ma ago was one of the most severe mass extinction of the Earth. The high-resolution study of the two Permo-Triassic boundary sections in Western Slovenia (Idrijca Valley and Masore section) and one in the Karavanke Mountains (Brsnina section) reveal that the main extinction occurred over a period of less than 100,000 year. It is supposed to be coincidental with the terminal phase of the end Permian marine regression, the eruption of the Siberian basalts and with a sharp spike $\delta^{13}C$ carb, $\delta^{13}Corg$, $\delta^{18}O$ as well as by a negative Ce anomaly and the enrichment in several major, minor and trace elements at the P/Tr boundary which is represented in Idrijca Valley section in clayey marl layer (0.8 cm) and in Brsnina section by a boundary clay (1 cm). In this study we represent the XRD-analyses of clay and/or clayey marl layers from the Upper Permian to Lower Triassic sedimentary sequence of the Brsnina section in the Karavanke Mountains. The aim of this study was to reveal the possible changes in the clay minerals composition at the P/Tr boundary transition most probably due to increased erosion and environmental changes which are supposed to suggest a causal relation between Siberian volcanic activity and significant impact on land and land species as well.