Geophysical Research Abstracts
Vol. 19, EGU2017-3027, 2017
EGU General Assembly 2017

Devonian reef formation and mass extinction on F – F boundary, East Russian Craton

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Middle- and Upper Devonian reefs are widely developed in the limits of the Pechora plate and the framings of Cis-Caspian depression,
The frameworks were mainly created by stromatoporoidea, first of all by amphipores, less and not always – by tabulate and rugose. Algae – green, red, calcimicrobes and cyanophytes – played an essential role in the supply of carbonate material and its biding. The reefs were inhabited also by bryozoa, crinoids, brachiopods, pelecypoda and other organisms.
In the limits of the Pechora plate the reefs were formed during Middle and Late Frasnian. They created long asymmetrical systems on the border of shallow and relatively deep areas, framed vast shallow banks and formed single isolated buildings.
In the setting of the Cis-Caspian depression single Givetian reefs were formed as a part of terrigenous-carbonate deposits. From the Middle Frasnian two types of reefs were developed – asymmetrical which framed deep-water gulfs of the Cis-Caspian microocean; and single, symmetrical in section, inside these gulfs.
The reef formation itself proceeded cyclically – during the transgressive stages the reefs were formed, and during the regressive stages of the fall of sea level the reef formation stopped and the reefs were covered by the clayey rocks.
Maximum of reef formation falls on the L. rhenana zone (L. P. gigas), and then after the break in the middle of the rhenana zone (M. P. gigas) it resumed and showed itself in much lesser form in the Upper rhenana zone and Lower lingoformis. At that time framework reef formatted was replaced by the formation of microbial structures or by the accumulation of bioclastic non-reef deposits, it means that it was ended before the Kellwasser events and the mass extinction, associated with it.