

Vendian orogeny - the first stage of Gondwanaland Supercontinent Assembly: evidence of the south-west part of Siberian Platform.

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The Vendian time is the epoch of forming terrigene regional cover on the Russian and Siberian Platforms. On paleomagnetic data the Siberian craton in Late Vendian was situated in low latitudes. The start orogeny around the Siberian craton is recorded by stratigraphic disconformity between the aulacogene sedimentary complexes and Upper Vendian molasse. Upper Vendian foreland basin has been developed under the influence of two principal factors: (1) progradation of the continental (fluvial) deposits from the orogenic belt (about 2000 km long) at southern and south-western periphery of Siberian craton to its interior, (2) marine transgression had been spreading backwards. Upper Vendian molasse (max 2500 m) have the trend of facies change like the typical pattern of the Swiss Alps. As a whole paleotectonic zoning the south-western part of Siberian craton been made of foredeeps and forebulgers belts. The last is manifested itself by the Baikit and Nepa-Botuoba anteklises. The sedimentary successions at the forebulgers have smaller deposit thickness and include many unconformities. The foreland basin has more complicate structure at the foredeeps in the Yenisei Ridge where it is like piggyback type occurred.

Foreland basin research was based on the analysis of the lithofacies, paleocurrent data, cyclic, sequences and modal composition of sandstones. Sedimentation was controlled by global geological processes - change the vector and rate of the sea-floor spreading, which was given evidence of simultaneous marine transgressions and orogenesis. Change of spreading vector was affected on the 2-order transgressive-regressive cycles, main alteration thrust impulses and crust loading manifested by 3-4 order cycles.