LITOSPHERE STRUCTURE OF THE URALS ACCORDING TO MODERN GEOLOGY-GEOPHYSICAL DATA

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Characteristics of deep Urals structure corresponding to the structure of poorly disturbed paleorift system have been received on the basis of great volume of works DSS and analysis of other physical fields and surface Geology. 1) Thinning of crystalline part of the crust under the Tagil paleorift of the Paleozoic up to 30km was established, whereas in flanks its thickness increases up to 35 km and 38-42km under the restricted adjoining massifs Precambrian, framing it, while the thickness of granite-gneiss complex of crust remains almost the same (7-8 km) everywhere; 2) in the lower crust, in the interval from 40 to 55 –60 km there is separated complex K-M of crust-mantle mixture type transient to the mantle according to its velocity parameters (up to .3-7.8km/s, with interseams 6.5 km/s); it is lens like in the cross-section, and mope developed under zones of large scale basaltic magmatism separated on the surface; 3) paleorift structure is restricted by systems of lisric faults. The combination of all three peculiarities of the structure is characteristic of the Rhine, the Rio Grande and other rifts in the continental crust; 4) but there are principle differences-development of ophiolite zones with newly-formed mafic crust. The system of ophiolite zones – axes paleospreading with toleitic basalts ~ N-type MORB – is conjugate in the Tagil paleorift. In accordance with the established peculiarities of deep structure the Urals mobile belt has been developing since the Archaic and Proterozoic, in the area of superdeep juncture, in the wide zone of lithospheric plates boundaries of the Eurasian continent, under the conditions of mantle diapir, intermediate by scale between oceanic (ophiolite) and continental.