

PECULIARITIES OF GEODYNAMIC ENVIRONMENT IN THE NORTH-WESTERN PART OF THE MAGELLAN SEAMOUNTS

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A lineament analysis of the relief was made using a detailed bathymetry map of the region drawn according to the results of multi-beam echo-sounding. The authors separated linear objects of the relief, measured their course azimuths, plotted the rose diagram of the lineament directivities of the region, and built the models of the surface and subsurface deformation field of the region at separating the blocks of dominant stress and strain. The blocks travel along the lines of alternation of stress sign (block borders). The directivities of the block borders were compared with the lineaments directivities resulting in conclusion that they both have spatial and generic relations. The systems of linear forms directivities of the relief and the borders of surface and subsurface blocks partially correspond to the four main systems of the global disjunctive network (planetary fracturing), which suggests a considerable influence of the latter on the structural plan of the region. Redistribution of stresses is associated with the modern geological processes leading to the formation of new configurations of seabed relief and partial destruction of the old surfaces of guyots.

Keywords: relief, guyot, block, stress model, strain, compression, deformation.