

**EVOLUTION OF THE METHOD OF MICROSEISMIC SOUNDING**

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Based on the findings of the dispersion properties of surface waves propagating along the boundary of the three-layer elastic half-space and vacuum, we offer a technique of additional processing of microseismic probing method data, which improves the accuracy and vertical resolution of this method. The technique is based on consideration of the effect of the set of inhomogeneities lying at different depths, but not just at a depth of about a half wavelength, as in the original microseismic probing method. Due to the nature of this technique, it can be used mainly for low-contrast greatly horizontally extended heterogeneous objects that are practically impossible to distinguish using the original method of microseismic sounding.

*Keywords: seismology, surface waves, method of microseismic sounding, geophysical medium, subsurface inhomogeneities.*