ON METHODS OF THE QUALITATIVE ANALYSIS FOR GEOLOGICAL INTERPRETATION OF GRAVITY ANOMALOUS FIELD

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Abstract. The relief influences essentially on the observed data while gravity field measurements are connected with strongly differentiated Earth's surface. In other words the measured field reflected both anomalous mass and topography of area. In such a case the qualitative analysis of field sources is not trivial. The possible method of the qualitative analysis is presented. It combines some transformations and analytical approximation of the initial gravity field. The whole process of problem solution is illustrated by an example.

Keywords: the qualitative analysis, analytical approximation, gravity field, topography, a background component, minimization of functional, method of subsidiary bodies, transformations, Gaussian curvature.