

Development of Singular Points Method in Geophysics Singular Points Method Development in Geophysics

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The basic scientific achievement of the PhD V. Berezkin are described. He more than 40 years most advantageously worked in the area of development of new methods of geological interpretation of anomalies of potential fields of the Earth. The essence created by him functional is stated. The most effective methods functioning on the basis of this functional are described.

In 1984 were executed 10 years from the date of death (June 13, 1994) remarkable scientist-geophysics, initiator of the whole direction in the field of interpretation of potential fields, PhD Valentin Berezkin. All scientific activity of V. M. Berezkin proceeded in greatest Russian geophysical institute "VNIIGeofizika" and was connected to extremely important subjects - straight prospecting of petroleum and gas traps by geophysical methods.

At the present stage of development of geophysical methodology a necessary condition for the approached decision of inverse problem of applied gravimetry is use of the additional information. The methods of interpretations based on geological correction of results of accounts are effective only in areas with the high contents of the geological-geophysical information. There, where this level low, irreplaceable role is played by direct methods of interpretation, first of all, methods based on use of the singular points of potential fields.

The singular points give the geological information on disturbance objects. As approaching the singular point the carried on potential field theoretically should beyond all bounds grow. In practice its behaviour depends from representative of the initial data and kind of the mathematical device. The value of use of the singular points is, that they can be found by observed potential fields without attraction of the additional information, and allow directly to receive the items of information on depths of gravimagnetic active bodies, their sizes and features of a structure (for example, about presence in them heterogeneities, faults etc.). The similar information can have as independent meaning, and be used for drawing up "of the first approximation" at the further application of a modeling method.