

## **Quantitative estimation of geological and hydrogeological characteristics by temperature measurements**

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On the basis of the statistical analysis of the results of the temperature measurements carried out in more than 400 long-standing deep brotels located in Russia, Belarus and Ukraina it have been established quantitative connections between geothermal and tectonic, geodynamic and hydrogeological parameters. On example of Pripyat depression is developed the method of separation of conductive and convective heat flow components and were defined velocities of fluid motion and the temperature correction value with effect hydrogeological factor. For the comparison of the hydrogeological characteristics of investigated regions we introduced the conception of the specific convective heat flow, that is invariant about the fluid motion interval and by its physical sense may serve as a convective analogue of the value of heat generation. Connection of geothermal field with tectonic regime made it possible to introduce the quantitative estimation of the coefficient of nonstability of geological structures and to show its natural increase from the regions of ancient consolidation to young structures of increased geothermal activity.