



## **Studying of the possibility of recovery of thermal energy of the magmatic chamber of the Avachinsky volcano by means of deep wells**

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The analysis of geological and geophysical data, including recent research results, has revealed the existence of the non-solidified magmatic chamber under the Avachinsky volcano (Kamchatka) and to estimate its depth and approximate size. The estimation of accumulated heat in dry rocks surrounding the magmatic chamber of the Avachinsky volcano is given with respect to variable sizes of the magmatic chamber during evolution and heat accumulation from the moment of its origin until now.

The investigated geological and geophysical preconditions provide clear evidence to a basic opportunity of use of thermal energy of the dry heated up rocks containing the magmatic chamber for purposes of supply of heat and electricity for the city of Petropavlovsk-Kamchatsky. Development and implementation of an interstitial heat exchanger (underground geothermal circulation system) by means of drilling of deep wells is suggested.