

Genesis and geologo-hydrochemical criteria for search of ecologically pure waters

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According to WHO standards and present physiologo-hygienic requirements in medicine weakly mineralized hydrocarbonate-calcium waters which do not contain increased concentrations of toxic elements, namely mercury, cadmium, berillium, arsenic, lead, etc., belong to ecologically pure waters.

Unique combination of geological and hydrogeological factors is essential in formation of underground waters with this content. Hydrochemical composition at such type of water can be formed at precipitations' filtration through vast lithologically homogenous thickness of carbonate rocks that do not contain heavy metals from load zone to discharge zone. Highly pure (over 90% calcite) limestones are formed in normally marine coastal reefogenic facies. Therefore main searching criterion for ecologically pure waters appear to be the sites of thick reefogenic formation' exposure to the surface

These conditions are typical to the region of Ufimsky plateau in the southern parts of Perm region and in Bashkiria where subregional sites of reefs of Upper Carbonian-Lower Permian age are developed. Predicted reserves of these waters are dramatic, but they require their estimation.