ESTIMATE OF PETROLEUM POTENTIAL OF LOCAL STRUCTURES ON HYDRO-GEOLOGICAL INDICES WITH USING STATISTIC METHODS.

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The late stages of studying territory petroleum potential are characterized by that moment that all the most large and even middle by hydrocarbon reserves pools are already discovered and are being developed. Search for small accumulations including ones missed during hunting for the most large pools is a topical direction. We have undertaken an attempt to search for the most informative hydro-geological indices (forecast criteria) and to create the special rule (decisive rule) of transforming information having in these hydro-geological indices into information about the petroleum potential indices of natural objects. The date about the mineralization of formation waters and also J, Br, NH4, and HCO3 content were used as the hydro-geological indices. As a result of conducted investigations with using the methods of multi-measure statistic analysis, we have received the sufficiently highly qualitative formalized models of forecast for estimating sediment petroleum potential separately for each of the oil/gas complexes being considered. It was determined that each of the complexes is characterized by its (inherent only to it) a set of criteria of petroleum potential forecast; the indices are also individual for each of the complexes. On hydro-geological indices with using the developed forecast models, the forecast estimate of sediment petroleum potential by six structures was received.