

GEOINFORMATION TECHNOLOGIES AT THE FORECASTING OF PLACER DEPOSITS

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Among the geoinformation technologies with wide application at the forecasting of unique natural objects - placer deposits, are: database management systems; data mining, first of all logic-informational and factor analyses; 2-D and 3-D-modelling, expert systems.

While the forecasting problem solution there are prime the creation of prognostic-search models of placer deposits and the construction of rules of decision-making for estimation of area, which are perspective on placer detection. In case of positive estimation the detailed studying has been carried out for useful component allocation at the selected territory.

The methodology of construction for prognostic-search models of placer deposits is based on a system approach and the logic-informational analysis of their multifactor multitag models in accordance with the main processes of placer deposit creation. While the analysis the tags receive the quantitative estimation of degree of their importance for the selection of perspective areas. Results are represented numerically, suitable for their automated usage for the creation of the knowledge base of the predicting expert system ASTRA. 2-D and 3-D-modelling allows to visualize the available geological information and to present the spatial location of placer productive layers.

The application of geoinformation technologies is shown on gold placer deposits of the Southeast part of the Aldan Shield and titanium-zircon placer deposit Centralnoe (the Tambov region).